

SIXTY-SECOND

ANNUAL MEETING

OF THE

American Institute of Instruction

LECTURES, DISCUSSIONS, AND PROCEEDINGS

Bethlehem, N. H., July 6-9, 1891

Published by order of the Board of Directors

BOSTON

AMERICAN INSTITUTE OF INSTRUCTION

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AMERICAN INSTITUTE OF INSTRUCTION.

SIXTY-SECOND ANNUAL MEETING,

JULY 6, 7, 8, AND 9, 1891.

JOURNAL OF PROCEEDINGS.

FIRST DAY—Monday, July 6.

EVENING SESSION.

The American Institute of Instruction opened its Sixty-Second Annual Meeting, at Bethlehem, New Hampshire, with an evening session, July 6, 1891.

The Institute convened in the Maplewood Casino and was called to order by President Ray Greene Huling, of New Bedford, Mass., at 8:10 P. M.

After a few pleasant remarks by the President, the Rev. Wesley J. Wilkins, of Bethlehem, N. H., conducted the devotional exercises, previous to which all present joined the Quartette in singing "Lead, Kindly Light."

The Schubert Quartette of Boston,—Mr. George J. Parker, 1st Tenor; Mr. George W. Want, 2d Tenor; Mr. Arthur B. Hitchcock, 1st Bass; Mr. D. Marks Babcock, 2d Bass,—were introduced and sang "The Cheerful Wanderer" by Mendelssohn. Encored they rendered the "Miller's Song" from Zöllner.

Both selections were given in a style that at once captivated the assembly.

President Huling then introduced, to deliver addresses of welcome, Dr. Charles C. Rounds, Principal of the State Normal School, Plymouth, N. H., and General George T. Cruft, Bethlehem, N. H.

WELCOME.

Welcoming the Institute on behalf of the teachers of the State, Dr. Rounds said :

It is an honor to represent the teachers of New Hampshire in welcoming the American Institute. In a certain sense, it may be said that the benefits to us and to you, of your meeting within our borders, is a mutual one. You remember the great meeting at Fabyan's some years ago, which was for the Institute a resurrection from the dead. If you receive inspiration and a new life from the great thoughts of God as manifest in the forms of nature amid which you meet, we, the teachers of New Hampshire, owe much to you from the uplifting which you have given us. Since your first meeting in the mountains, there has been much advance in various lines among us, much of which is doubtless due to you. We are under special obligations to you for coming here among our mountains, from your interest in the higher concerns of the soul, as an advance guard of the hosts of pleasure-seekers who follow.

In your program, you have evidently given over the task of threshing old straw, but give your attention to questions which are of vital interest to us. We feel that your discussion of these living educational issues may set us forward years in our work.

You have wisely arranged your program, so as to give only the forenoon to your intellectual or professional work and the afternoon to the exploration of the beauties around you. Explore them well. I hope you will come to feel in some measure the strong influence which New Hampshire throws around those who come to live within her borders. You will find her people, as fits the character of their home, not mercurial but granitic; not so quick to move as some, but having taken a stand they stay.

You come to a good place. You will find that Bethlehem can hold more sunshine to the square mile than any other place. You have come back to sources of power as well as of beauty. There was significance in the aspects of nature as you came together here this afternoon: in the west, the wondrous beauty of the sunset; in the east, the mountains veiled in clouds, sending down to the south the power which turns your wheels and creates your wealth.

We welcome you to all the recuperation and inspiration which can come from the wonderful nature around you. We welcome you to the enjoyment of all that we can give, and we know that in the end we shall owe more to you than you can owe to us.

Gen. George T. Cruft, in behalf of the people of Bethlehem, bade the Institute welcome. He said:

Two years ago in this same hall was given to me the pleasure of welcoming to my town, and to this building in its first use for a public gathering, the American Institute of Instruction. As I recall that event, it seems to me I must have been impressed with a weighty sense of the required formalities of the occasion or the important nature of my obligation to it. For I wonder now at my presumption and your patience which allowed me so long to stand like the Dragon before the gates which you were waiting to have opened to the feast of reason and wisdom beyond. But though here again, I come in a different character, like the Prodigal Son, repentant, having seen the error of my ways, taught wisdom by experience; not as obstructionist, nor "to the marriage of true minds to admit impediment," but to say briefly and informally what must be said. It is always a pleasant mission to be a medium of kind feelings and expressions, and I am happy to stand here to-night to voice the sentiment of my people and, with my hand closely upon their pulse, to say that their hearts beat with a stout throb of welcome to the American Institute of Instruction. We have met you before, as an organization and socially in our homes, and we know whereof we speak when we say we are glad to see you back again. We are glad, and complimented, too, that your officers and members were so gratified by their former reception, so satisfied with the character of the accommodations afforded, that they were disposed so soon to come again. We have

always been duly impressed with a sense of the superior character of your organization, especially as distinguished for intelligence and wisdom of understanding ; but your acuteness and profundity of wisdom and good sense were never so clearly manifest to us as in your decision to make this again your place of meeting. All good things (and Institutes of Instruction, of course,) certainly deserve to flourish ; but it is well to remember that they flourish best in favorable soil. The people of our village, quickened of late years to a larger interest in the subject of education, are fully "en rapport" with the purpose of your meeting and your general educational missions. We are members of a common body and we feel the result and influence of your work in establishing a healthy system of public instruction. With all good citizens, we realize the fundamental importance of education as a factor in our national organization. Education is not a hackneyed subject upon which there is nothing new to be said. Educational conventions are not a waste of time, which the participants might better devote to the performance of their regular duties. The last profitable word has not been said on the subject and never will be. The world moves in the cause of education as in everything else : subjects may be discovered which have been discussed before ; but between each two conventions new applications of old principles are made and original experiments are tried, so that through these conventions the teachers and the world at large get the benefit of the experience and success of original thinkers in this field. To the important work you have come to perform, I welcome this association. I welcome you to the rest, the freedom, and the joy of our everlasting hills,—to this picturesque and lovely town, "the hub" of this mountain universe, central in location and in summer attractiveness and life. On this high spot, you may worship nature in all its beauty and grandeur, lift your thoughts from the tiresome ruts of ordinary life, taking deserved rest or perhaps reawaking dormant sensibilities amid these wonders of creation. I sincerely trust that your sojourn in our midst may be pleasant, that the deliberations of your convention may attain full measure of success, prove helpful in your professional work, and that these draughts of inspiration, with the added nectar of our hills, may be so stimulating in influence as to prompt you to repeat your visit to Bethlehem again and again.

RESPONSE.

The President, Ray Greene Huling, responded to the addresses of welcome, saying :

Dr. Rounds, Gen. Cruft, Ladies and Gentlemen, we thank you most heartily for the kindly welcome that rings from your words and beams from your faces. We accept your greetings and hope to enjoy most thoroughly the advantages which the State and this community so freely offer. But the Institute intends not only to receive but also to give. And an earnest of this has already become manifest. I had been for two whole days upon the ground, finding all the time hilltops and valleys alike enveloped in cold, gray clouds. It was only when the American Institute came rolling in upon the train, that the clouds were dispelled and the sun burst forth in its evening glory. Thus may the old Institute ever be the brightener and illuminator of our lives !

Many of us come from the more populous communities of New England, where large schools abound and facilities for successful work are easily secured. Yet we come with hearty sympathy for the rural communities, like this very Bethlehem, where educational progress is a continual struggle, and where success is won only by self-denying effort. The cause is the same in city or in country, and we trust the present assembly may bring cheer to every worker in educational fields. Your noble State needs no commiseration, however, upon its educational interests, even though its population is largely rural. In what commonwealth is there a better system of teachers' institutes? Or from what communities go forth stronger men?

Ladies and Gentlemen of the American Institute, I congratulate you on the auspicious opening of our present meeting. We come here not simply to accept welcomes, nor only to help others, but as well to receive value for ourselves. This oldest of educational bodies has always been fruitful in blessings to its devotees, teaching them earnest lessons in pedagogics and inspiring them with hearty zeal for the prosecution of their chosen work. In later years I seem to discern a richer development of its work. It still informs the mind as of yore; but it has added to its former service the richer one of invigorating the body and warming the heart. It goes in these days where lessons are to be

learned, but also where bracing air and charming scenery are to be found and where men love to congregate. It provides for clear thinking and for vigorous discussion; but it leaves time open for healthful recreation and for that delightful companionship which constitutes for some of us the greatest charm of gatherings like these. For there are not a few among our number who owe much to personal contact in these meetings with you whose heads are whitening as you carry forward the good work of the American Institute. For the accomplishment of its varied service the Institute has now come to an excellent place. None, moreover, more need the grateful influences of these surroundings than those who are fresh from the wearying scenes of the school room. All things are now ready for the feast. Let us enjoy it to the full.

After the responsive address, President Huling stated that he had been requested, by one whom we are always glad to honor, to ask the Schubert Quartette to sing a favorite selection of his. The person making the request was Dr. Wm. T. Harris. In his honor the Quartette sang "Remember Thy Creator" by Rhodes. Encored they sang "In May-Time" by Billeter.

Mrs. Eugene C. Webster, of E. Providence, R. I., was then introduced and read very acceptably "Friar Jerome's Beautiful Book," a poem by T. B. Aldrich.

Hon. William T. Harris, LL. D., U. S. Commissioner of Education, Washington, D. C., delivered a lecture on "VOCATION VERSUS CULTURE, OR THE TWO ASPECTS OF EDUCATION."

[For all addresses and the lengthier speeches in debate, the reader is referred to pages of this volume following the "Journal of Proceedings" and its appendixes. The two parts of the volume are distinguished by difference in style of paging.]

After the President had announced that a meet-

ing of the Directors would be held, in front of the platform, directly after adjournment, the Institute adjourned, to meet at Cruft Hall, Bethlehem, Tuesday, at 9:15 A. M. Previous to the adjournment, the Schubert Quartette sang charmingly a "Serenade" by Conradi.

DIRECTORS' MEETING.

After adjournment, a business meeting of the Directors was held in front of the platform.

At this meeting, the Directors voted that the annual assessment for the coming year be one dollar, for each member; also, that the volume of this year's proceedings be sent to any member asking the Treasurer therefor and paying him ten cents for postage thereon.

Amendments were proposed by Mr. M. Grant Daniell, Chairman of the Committee on Membership, their object being the creation of a permanent active membership, as distinguished from the associate membership of one year's continuance. Such distinction was contemplated but not effected by the present constitution. The proposed change was adopted at subsequent meetings, as the journal will state.

SECOND DAY—Tuesday, July 7.

MORNING SESSION.

The Institute held its morning session at Cruft Hall, Bethlehem, N. H.

The meeting of the Institute was called to order by President Huling, at 9:15 A. M., and was opened with the singing of "Manoah," led by the Schubert Quartette.

Devotional exercises were conducted by Rev. Walter P. Taylor, of Bethlehem, N. H., who read a selection from the Scriptures and offered prayer.

The audience, led by the Quartette, sang "Jerusalem the Golden."

President Huling announced that, at the meeting of the Directors held the previous night, it was voted that the membership assessment should be \$1.00 for each member present.

It was also voted that ten cents should be paid to the Treasurer by all members who wished copies of the printed proceedings sent to their address.

The Schubert Quartette sang "Lift Thine Eyes," from *Elijah*, by Mendelssohn.

President Huling introduced the speaker of the morning, Miss Lucy Wheelock, of the Chauncy-Hall School, Boston, Mass., who read a paper entitled "THE FOUNDATION AS LAID IN THE KINDERGARTEN AND THE PRIMARY SCHOOL."

Miss Wheelock's paper was discussed by Miss Jeanie L. Jillson, of Newburgh, N. Y.

The discussion was continued by Mr. George A. Walton, State Board of Education, Newton, Mass.

Mr. James S. Barrell, Harvard Grammar School, Cambridgeport, Mass., followed in remarks to call out the next speaker.

Mrs. R. S. Rust, Cincinnati, Ohio, responded to the call and closed the discussion.

The time allotted for the discussion of this paper having expired, the President announced that all members of the American Institute of Instruction wishing

the printed volume of proceedings sent them must leave with the Treasurer ten cents to pay postage.

Intermission.

At 10:30, the President called the assembly to order and announced that a "Bureau of Information" had been established in the office of the *White Mountain Echo*.

President Huling then introduced the second speaker of the morning, Mr. C. W. Hill, Master of the Bowditch School, Boston, Mass., who read a paper on "THE CONTRIBUTION SUPPLIED BY THE GRAMMAR SCHOOL."

The discussion of Mr. Hill's paper was opened by Mr. Lewis H. Meader, Principal of Grammar School, Providence, R. I.

Mr. James A. Page, of the Dwight School, Boston, was called to the President's chair while the discussion continued. After Mr. Meader, Dr. C. C. Rounds, State Normal School, Plymouth, N. H., debated the topic.

Mr. Alfred Bunker, of the Quincy School, Boston, thought that, unless something were dropped from the course of studies, nothing more could be added. He asked Dr. Rounds to explain how it could be done.

Dr. Rounds explained: by a modification of the programme, giving to each branch its proportion of the time. If some not very important subject could not be taken up every day, give to it two or three recitations a week.

President Huling then resumed the chair and announced that an excursion to the Profile House and

the Flume had been planned and would leave Bethlehem at 1 P. M.

Intermission of two minutes.

President Huling then called the house to order and introduced the last speaker of the morning, Cecil F. P. Bancroft, Ph. D., Principal of Phillips Academy, Andover, Mass., who read a paper on "THE SERVICE RENDERED BY THE SECONDARY SCHOOL."

The discussion of this paper was opened by Mr. Charles W. Parmenter, of the Latin School, Cambridge, Mass., and continued by George A. Williams, Ph. D., Principal of Vermont Academy, Saxton's River, Vt.

Prof. Calvin M. Woodward, A. M., of St. Louis, continued the discussion. He endorsed the paper and also the suggestions made by Mr. Parmenter and by Mr. Williams. He would only add that the five windows, spoken of by Dr. Harris in his wonderful paper, should be kept open, so as to awaken in the minds of the children, through these open windows, a love for everything that is good and noble around them.

Prof. William Cranston Lawton, of Bowdoin College, Maine, thought that too little attention was given to the bright children in our public schools. The boys and the girls who were going to college could not commence the study of the languages early enough in life. They were kept back in the class, plodding over work that was of little if any value, because of the dull pupils in the class. Some changes in our public schools ought to be made to remedy this evil. He believes in the public schools, for he was educated in them.

This ended the discussion and the Institute adjourned at 12:30 P. M., until evening.

SECOND DAY—Tuesday, July 7.

EVENING SESSION.

The Institute resumed its session, in the Casino.

President Huling called the meeting to order at 7:45 P. M., and announced that the Schubert Quartette would entertain the audience for a short time, as Mrs. Eugene C. Webster had not arrived.

The Quartette sang for its first number "The Boy and The Owl" by Chadwick. Encored they sang "Pilgrim" by Marston.

For the second number they sang "The Cannibal Idyl" by Faber.

Mrs. Eugene C. Webster was then announced and read "The Second Trial," by Sarah Winters Kellogg.

Mr. M. Grant Daniell, Chairman of the Committee on Membership, reported that the committee thought it wise to have a list of active members so kept that it could be referred to at any time, from which the Institute could select its officers.

Such a list had been prepared, would be supplemented as time allowed, and would now be read.

He proposed a list of candidates who were elected Active Members of the Institute.

[For the reason that a full list of the members elected will be given in this volume, the names are omitted at this point.]

President Huling then appointed the following committees:—

Committee on Nominations.

Mr. Thomas H. Barnes, Boston, Mass.
Mr. D. W. Hoyt, Providence, R. I.
Mr. C. H. Morss, Portsmouth, N. H.
Mr. Geo. C. Purrington, Farmington, Me.
Mr. J. D. Bartley, Bridgeport, Conn.
Dr. Geo. A. Williams, Saxton's River, Vt.

Committee on Resolutions.

Pres. W. De Witt Hyde, Brunswick, Me.
Mr. H. S. Tarbell, Providence, R. I.
Mr. L. S. Hastings, Claremont, N. H.
Dr. Paul H. Hanus, Cambridge, Mass.
Mr. A. H. Campbell, Johnson, Vt.
Mr. L. L. Camp, New Haven, Conn.

President Huling then introduced the speaker of the evening as the man whom Harvard College went across the water to procure, Josiah Royce, Ph. D., Professor of Philosophy in Harvard University, who read a paper on "CERTAIN TENDENCIES IN THE DEVELOPMENT OF THE AMERICAN UNIVERSITY."

President Huling then explained the Certificate of Membership and announced that the R. R. ticket stamped with the Institute stamp was not a Certificate of Membership and could not be used to gain an early admittance to the meetings.

Mrs. Eugene C. Webster recited a humorous narrative, "Views of Life in a Summer Hotel." Anon.

The Schubert Quartette sang "Annie Laurie," by Buck.

President Huling called the adjourned meeting of the Directors at the usual place, after which the Institute adjourned.

DIRECTORS' MEETING.

In the morning at 8:30 o'clock, an adjourned meeting of the Board of Directors had been held. At that meeting, an adjournment was taken to the close of the evening session. At both these meetings, the amendments to the constitution and motions subsidiary thereto were debated. The board now again adjourned to the close of the Wednesday evening session, to await the report of the Committee on Membership, who should present the amendments in an improved draft.

THIRD DAY—Wednesday, July 8.

MORNING SESSION.

The Institute resumed its sessions, at Cruft Hall.

President Huling called to order, at 9:20 A. M., and asked all to join the Quartette in singing "Nuremberg."

Devotional exercises were conducted by Rev. W. N. Ackley, of Narragansett Pier, R. I.

The assembly, led by the Quartette, sang "Duke Street," after which the Schubert Quartette sang "Loyal Song."

President Huling announced that the photographer was not successful in his first attempt to take a picture of the Institute and would try again directly after adjournment.

The uses of the Membership certificate were then explained by the President: (1) To gain early admittance to the meetings and (2) to furnish money to the Institute with which to pay its expenses.

There are three kinds of members : (1) Honorary,—those that are rewarded for long and active service in Institute work ; (2) Active,—the working members ; and (3) Associate,—those who join the Institute for the sake of the excursion and what enjoyment they can get out of the entertainments furnished by the Institute at its meetings.

The President then said : “ By a vote of the directors, I am happy to make the following announcement. A movement has been started to honor the memory of Wendell Phillips by erecting a hall, similar in character to the Cooper Institute in New York city. For this purpose, contributions will be received by Miss May, of Boston. Contributions of any magnitude from one dollar to one thousand dollars are being received. This announcement is made simply to inform the Institute that such a movement is being carried forward. I assure you that it gives me much pleasure to have the honor of announcing such a movement.”

Dr. C. Wesley Emerson, President of the Emerson College of Oratory, Boston, Mass., was then introduced and read a very interesting paper on “AESTHETIC PHYSICAL CULTURE.”

Dr. Emerson's method of physical culture (the Delsarte System) was illustrated by a class of students under the leadership of Mrs. Emerson. The class was energetic, graceful, and in perfect training. The exercise was received with hearty applause by an audience, which filled Cruft Hall to its full capacity. The class was composed of Miss Grace James, Miss Lottie James, Miss H. S. Southworth, and Mr. Walter Tripp.

The time allotted to the discussion of Dr. Emerson's address having been used in illustrations with the class, President Huling asked instructions from the Institute: whether time should be given for the discussion, or whether the next paper in order on the programme should be taken up. It was voted to take up the next paper.

An intermission of two minutes was taken, after which President Huling stated that Dr. Enebuske had been called to Europe, since his promise to present a paper before the Institute; but he had done the next best thing to being here himself, he had written his paper and had sent to read it one who is very well known to all Boston people and is undoubtedly known to many teachers in all parts of New England. He then introduced Miss Amy M. Homans, of Boston, who read the paper prepared by Claes J. Enebuske, A. M., Ph. D., (of Sweden,) on "PEDAGOGICAL ASPECTS OF SWEDISH GYMNASTICS."

A class of pupils, consisting of Misses M. S. Wallace, Senda Berrnsen, Helen May, Martha Barnes, C. E. Shepard, and Ethel Berrin, under the leadership of Mr. Louis Collin, gave a practical illustration of the system advocated by the paper.

The discussion of Dr. Enebuske's topic was opened by Mr. C. E. Meleney, Superintendent of Schools, Somerville, Mass.

President Huling stated to the Institute that the discussion could now be devoted to both papers. Dr. William A. Mowry of Boston spoke. He favors the Ling System and takes credit to himself for starting the movement in the direction of the Ling System

more than thirty years ago (1860). In 1860, Dr. Wellington, of the Boston School Committee, outlined the Ling System and thought very highly of it.

Mr. James A. Page, of the Dwight School, Boston, favored the Ling System. He had recently seen the brain of the late Laura Bridgman, which is in the possession of President G. Stanley Hall, of Clark University, Worcester, Mass., and had been much impressed thereby. The cells or centres of the brain of this unfortunate woman, that were to receive the impressions from the outside world through the eyes, instead of being in the front part of the brain, were in the back part. The same was found to be true of the centres that were to receive the impressions through the ears. Until Laura Bridgman was three years old, she enjoyed all of her faculties in their healthy normal condition. Soon, however, her sight and hearing were lost, and at last she was totally blind and deaf. Mr. Page thought that, if the impressions upon the brain were so lasting, it was of the utmost importance that those impressions should be right in kind. The brain is affected by the particular acts addressed to it by the hand and other parts of the body. It is of importance that these physical exercises, therefore, should be arranged on a scientific basis. In this way, healthy activity and development are secured.

Mr. Edward P. Jackson, of the Boston Latin School, sees advantages in all systems of gymnastics; thinks some of the advantages of some of the movements very much overestimated; thinks it makes children unnatural in their movements. Animals in their natural state do not make systematic actions; and why should

children, who are but animals of a higher type, be trained to make them? He fears that some of the required movements are too vigorous.

Mr. Henry C. Hardon, of South Boston, favors the Ling System, because of its good effects upon the students,—physically, mentally, and morally. This system, said he, could never have taken such rapid strides in this country and been established as one leading, if not the leading, system of gymnastics, had it not been for the generosity of that noble-minded, public-spirited woman, Mrs. Mary Hemenway. By a proper and intelligent practice in gymnastics, the body may be made to increase or to decrease in weight. He hopes that every teacher will avail herself of the opportunity to make herself skilled in the gymnastic art.

Mr. George A. Walton, of the Massachusetts Board of Education, rose and read a question that had been passed to him: "Will Mr. Meleney state what he means by the moral effect upon children produced by this system of gymnastics?"

Mr. Meleney answered that he considered that respect for self, habits of attention, of strict obedience, of promptness, and of self-possession were moral effects produced by this system. It is not possible, said he, to convince by argument; but, to the one who has observed the practical workings of the system through a series of years, it is very apparent.

Mrs. Southworth, of Boston, would call attention to the development of the body; to the freedom and grace of movements; to the naturalness of the exercises, teaching the muscles to fulfil the uses for which they were created.

Mr. Walton was asked why he did not favor military drill? His reply: Because it suggests the settlement of difficulties by force of arms, and it awakens in the minds of the children ideas of warfare that ought not to be awakened in the minds of the young.

This aspect was warmly opposed by Mr. Jackson, of Boston; Mr. Williams, of Saxton's River, Vt.; Mr. Daniell, of Boston; Mr. Barrell, of Cambridge; Dr. Mowry, of Boston; and Miss Giddings, of *Jenness's Magazine*.

The discussions were spirited and pointed.

The Institute then adjourned.

THIRD DAY—Wednesday, July 8.

EVENING SESSION.

President Huling called to order, in the Casino, at 7:45, P. M.

The Schubert Quartette entertained the audience for a short time with their beautiful singing. They first rendered the "Italian Salad" by Genée. This being heartily applauded, they sang "Love's Old Sweet Song" by Molloy, which was also applauded.

President Huling then announced that five cars would leave the Maplewood station for Bethlehem, directly after the close of the meeting.

On the morrow, a train would start from Bethlehem for the Profile House and the Flume, at 7:45, A. M.

Members of the Institute could procure dinners at the Summit House on Mount Washington for one dollar, and supper, lodging, and breakfast for three dollars.

At the Treasurer's office, a directory giving the Bethlehem addresses of the members of the Institute had been prepared, which was at the service of the Institute.

Pamphlets of the proposed Wendell Phillips Hall had been left for distribution, and copies of "Lost Art" and his celebrated "Freedom Speech" could be obtained in one of the rooms of the hall, for the sum of twenty-five and ten cents each respectively, the proceeds to be devoted to the fund for the proposed hall.

President Huling elicited much applause by announcing that the Schubert Quartette would give a concert in honor of the Institute, in the Casino, on Thursday afternoon.

These announcements were followed by readings, by Mrs. Eugene C. Webster: George L. Catlin's "The Street Musicians," and (encore) James Whitcomb Riley's "The Raggedy Man."

Mr. Daniell reported for the Committee on Membership a list of names and moved that the list be accepted and the applicants be elected members of the Institute. His report was accepted and the applicants elected active members of the Institute. [The names are included in the full list contained in this volume.]

President Huling then introduced the first speaker of the evening, William A. Mowry, Ph. D., Editor of "*Education*" and member of the Boston School Committee, who read a paper on "THE MOVEMENTS FOR PHYSICAL TRAINING IN THE BOSTON SCHOOLS."

The second speaker of the evening was introduced, Edward Muzzey Hartwell, Ph. D., M. D., recently

Associate in Physical Training and Director of the Gymnasium of the Johns Hopkins University, and now Director of Physical Culture in the public schools of Boston, who read a lecture on "SOME ASPECTS OF ATHLETICS AND GYMNASTICS AT HOME AND ABROAD."

This lecture was illustrated by stereopticon views of American, English, French, German, and Swedish gymnasia and play-grounds.

The views were pleasing to the audience and showed a careful study of the subject by Dr. Hartwell. They were skillfully exhibited with stereopticon by Mr. J. W. Black, of Boston.

The evening closed with a beautiful duet sung by Messrs. Parker and Hitchcock, of the Schubert Quartette: "The Moon Hath Raised Her Lamp Above," by Benedict.

The Institute adjourned.

DIRECTORS' MEETING.

The Board of Directors held an adjourned meeting at the close of the Institute session. The Committee on Membership reported an improved draft of the amendments to the constitution, necessary to secure a permanent active membership on a practicable paying basis.

After some debate, it was unanimously voted to recommend to the Institute the adoption of these amendments. They will be read in their place in the proceedings of the Thursday morning session of the Institute.

FOURTH DAY—Thursday, July 9.

MORNING SESSION.

President Huling called the Institute to order at 9:15, A. M., and invited all to join in singing "Thatcher." The Quartette led the singing. Owing to the pleasant weather, the attendance was not so large as upon previous mornings, many availing themselves of the privilege of going to the top of Mount Washington.

Devotional exercises were conducted by Rev. C. F. P. Bancroft, Andover, Mass.

The Quartette led and all present sang "Hursley," after which, the Schubert Quartette sang "Arise, Shine; for thy Light is Come," by Rhodes.

The President announced the concert to be given at 3 o'clock, in the afternoon, at the Casino, and extended a cordial invitation to all members and friends of the Institute to attend.

The report of the Committee on Necrology was called for and read by its chairman, Mr. D. N. Camp, of New Britain, Conn. The report shows that six members have died since the last meeting of the Institute.

The part of the report that referred to the death of Mr. James F. Blackinton was presented by Mr. James A Page, of Boston.

President Huling asked all present to manifest by a rising vote their adoption of this report and to remain standing while the Schubert Quartette led in the expression of sympathy for our deceased educational

friends by singing "We Shall Meet By and By." The Quartette sang with deep feeling.

The report accepted is as follows:—

REPORT OF THE COMMITTEE ON NECROLOGY.

In reviewing the past year, in the history of persons identified with the cause of education who have passed from earth, we are compelled to exclaim with the poet:

"Death lays his hands on kings."

Some have fallen in the very heat of service, while others have been gathered like ripened sheaves, after long lives of toil and victory. The first of our number to fall was William Henry Lambert.

WILLIAM HENRY LAMBERT.

William Henry Lambert, Ph. D., son of Isaac Lambert, Jr., and Lucy L. Lambert, was born in Durham, Maine, August 8, 1843. By the death of his parents, he was early left an orphan and at six years of age he found a home in the family of his uncle, Jeremiah Dingley, Jr., where he had parental kindness and care. His religious sensibilities were early awakened, and while a boy he became a member of a Baptist church in Auburn.

He was fond of books, a great reader, and a close student, and having completed the studies of common schools, at the age of fifteen, he became an apprentice in the printing office of the *Lewiston Journal*, published by congressman Nelson Dingley, Jr. In three years, he had mastered the printer's craft and become fitted for college. At the age of 18, he entered Waterville College, now Colby University, employing his college vacations in teaching district schools or working in the printing office. In this way, he acquired means, which were supplemented by his friends, for completing his college course, and he graduated with college honors, afterwards conscientiously repaying the advances made by friends. He taught three terms in the Hampden, Maine, Academy, meanwhile studying law. In September, 1866, he was admitted to the bar at Augusta. On the 11th of the same month, he was married to Miss Emma F. Otis, of Waterville; and, after a short visit to the West, he returned to New England, to enter

anew upon his life work as an educator. He was principal of the East Corinth High School during the Winter and Spring of 1866-67, of the Castine High School in 1867 to 1869, of the Augusta High School 1869-70, of the Lewiston High School 1871-74, and of the High School at Fall River, Mass., 1874-79, when he removed to Malden, where he was superintendent of schools until he resigned in 1884. He had been admitted to the practice of law in the courts of Massachusetts in 1883 and, soon after resigning the superintendency at Malden, he opened a law office in Boston, but devoted two days each week to superintending the schools at Everett. In 1885, he was again invited to his old position as principal of the High School at Fall River, and, two years after, the magnificent B. M. C. Durfee High School building was completed, and he had the privilege of transferring his school then numbering 468 pupils to its spacious and convenient rooms. Here his superior abilities were manifested in the re-organization of the school and the revision of the plan of studies. While in the very midst of his work, in the very height of its success, he was suddenly called to lay it down and go up higher. He was in his usual place in school on Friday, the last day of October; on Saturday, he addressed a convention of teachers; and on the following Tuesday, Nov. 4, 1890, his earthly career was closed. He left a devoted wife and two daughters and a large circle of friends, to mourn their sudden loss.

Dr. Lambert, in all the schools in which he had been placed, had displayed his peculiar gifts as a teacher. His thorough scholarship, his broad and comprehensive views of education, constantly enlarging by study, reading, and observation; his winning manners, and his tact in dealing with children and youth, conspired to give him power in the school room; and, when to these we add his unselfish spirit, his inherent love of truth and justice, and his strong faith in the eternal results of right training, we have some of the elements of his great success.

But he was more than a teacher; he was a true educator in the highest sense of the term. In his varied lectures, addresses, and papers, read before teachers' associations and other meetings; particularly before the Middlesex County Teacher's Association in 1882, 1884, and 1886; before the Bristol County Association in 1879 and 1884; before the New England Association of School Superintendents in 1880, 1881, 1883, and 1884; and before the

Massachusetts Teachers' Association at different times since 1876, he exemplified his varied powers and breadth of thought. He was unanimously elected president of the latter Association in 1888 and 1889, and had prepared the program in part for 1890, a few days before his death. In 1889, he received from his Alma Mater the degree of Doctor of Philosophy. He joined the American Institute of Instruction in 1872, has twice lectured before it, and had been one of its counsellors for some years at the time of his death.

JOSEPH WHITE.

Joseph White, LL. D., was born at Charlemont, Mass., Nov. 18, 1811. He graduated at Williams College in 1836 and was for two years a tutor in that institution. He studied law and for seven years was engaged in the legal profession, his practice being chiefly in Troy, N. Y. He was for a short time agent of a manufacturing corporation at Lowell, was a member of the Massachusetts Legislature at different times, being in the Senate in 1857. He was Bank Commissioner in 1858 and, in 1861, became Secretary of the Massachusetts Board of Education. He held this office for sixteen years. Subsequently, he was treasurer of Williams College, and for forty-two years was trustee of that institution. The degree of Doctor of Laws was conferred upon him by Yale College in 1868.

He became a member of the American Institute of Instruction in 1861, was appointed counsellor the same year, and also the next, and, in 1863, was made one of the vice presidents, and his name was continued on the list for many years. He lectured before the Institute in 1870 upon "Compulsory Education," and at other times upon other topics. He was a devoted friend of education, a wise counsellor, and a true type of the New England Christian gentleman. He was married, but had no children. He had for many years made his home at Williamstown, Mass., where he died Nov. 21, 1890.

JAMES FLETCHER BLACKINTON.

James Fletcher Blackinton was born at Attleboro, Mass., Sept. 5, 1819, and died at Winthrop, Jan. 7, 1891. He was a lover of books from early childhood. It is one of the traditions of his

native place, that, as a boy, he rode a horse for his father to plough, with a Latin grammar in his hand, and he was recommended as a teacher of one of the public schools there at sixteen years of age. He prepared himself for college, was admitted to Brown University in the class of 1845, and took good rank. He was obliged to leave, however, before graduating, owing to some physical disability, and received his degree at a later period. He had taught school for several winters in different places, when in 1845 he became principal of the High School at Wakefield, Mass. In 1848, he was chosen second submaster of the Lyman School, East Boston, from which position he was promoted to the first submastership in 1853. He was the first master of the Emerson School, chosen by the unanimous vote of the School Board, and the citizens of East Boston tendered him a reception unprecedented at that time in the history of the city. It was at this time that I became acquainted with him, learning through the long years of unclouded friendship gradually to know him as a man of uniform disposition, of scholarly attainments, of oratorical gifts, of sterling character, of fine presence and bearing on all public occasions, and altogether a rare man.

It is however chiefly of what I may venture to call the more personal element of the man that I desire to speak in the few minutes I may take of your time. Mr. Blackinton still stands out to me most vividly and really as a *personality*. There is no doubt, I think, about the large place which the personal element, as a fact, holds in our profession; but the question is, Ought it to hold that place? That is what many people doubt and some vehemently deny. They think the personal element an impertinence, an interference with the pure light of truth. Let all thinking be considered on its own merits, they say, and not on the ground that this man or that man has thought it. We do not believe the multiplication table because Pythagoras has given it to us. Let all teaching be regarded in the same way.

This sounds plausible, and yet the question cannot be settled in any such off-hand way. How is it with the facts? After all, the fact of how things *are* actually in this world and of how things do really live and grow in the realm of thought is something not to be lightly treated.

The more one looks into the great order of the world or into the life of man, the more one finds that from beginning to end the

personal element cannot be excluded, without some wrench, some violence done to the nature of things.

For instance: the child believes in *persons*, before it believes in any abstract truth or truths. Take the normal development of child-life: the child believes in father or mother *first*; believes by and by in truths through them. It may be said that when the child has first believed,—say in kindness or truthfulness,—through the parent's influence, it by and by comes to believe in them apart from parents or any one. Yet that is not quite so. The good quality, the trust in right or duty of any kind, that children first learn from father or mother or teacher, they will still associate with him long after they have come to feel its sacredness *for themselves*. And all advance in truth, all interest in higher things, will constantly keep coming through *personal* influence.

If you want your boy to be interested in science,—well, a book about science may do it,—but if you can put him alongside some *scientist*, some man who knows and loves the wonders of creation, that will do more than any book to start a living interest in the subject. A country walk with a botanist, or with one who knows all about insects and birds, or who can read the story of the rocks and tell the meaning of this line of bluffs or of that roadside pebble; or an hour with an astronomer, yes, even a hand-shake with any famous man who has done great things in the world—why, the mere touch of *personal* contact is something that strengthens and clinches the abstract interest beyond all telling.

So it is in all that youthful experience of hero-worship. It is an uplift to life. Of course, the heroes may be inadequate, one-sided heroes, so that by and by we outgrow them. We may leave them behind, but does that mean that they are worthless, or mere false trails across the real path of truth. No, it is through our faith in *persons*, that we learn the sacredness of faith in abstract truth. And though we may outgrow this or that personal ideal, we do not outgrow the nature which still finds in *personal life* all the strongest forces of thought and influence. Still, in the *full-grown* life of the world, it is the forces of *personal* character that group and sway society. A good kindly life, looking up with loving reverence and out with large human sympathy, is, as Rev. Brooke Herford says, the truth about life *vitalised*. "The Word made flesh"—all the community *believes* in Him. Perhaps it is

the only thing in which they do believe *alike*. Very likely they are of half-a-dozen various creeds, and many would say they had no creed at all; but they all believe in *Him*. They do not know in *what* they believe, but they know in *WHOM* they believe.

These are the thoughts that have been borne in upon my mind, as I have attended the various meetings and heard the different testimonies of old and young, teachers, citizens, parents, and pupils, not only as to how much they loved our departed friend, but as to how much they *believed* in him.

And when I look into this growth and development and grouping of all the common life about us, and see how, *every where*, the *personal* element comes in, has to come in, and is, indeed, the paramount force in the common thinking and the world's acting, I remember him, the force of his personality, and still feel that I have in that a clear, bright point of very real life to look to, to believe in, and to love.

JAMES PYLE WICKERSHAM.

James Pyle Wickersham, LL. D., a direct descendant of Thomas Wickersham who settled on a tract of 1000 acres in Chester Co., Pennsylvania, in 1701, was born in Newlin township in that county, March 5, 1825. While a boy he attended the district schools, working on the farm summers, until he was sixteen years of age, when he went to an academy, teaching at intervals to earn the means of continuing his studies. In the spring of 1845, he married Miss Emmarine Taylor. He had already become principal of the academy at Marietta, in Lancaster County, and he soon won a reputation which placed him in the forefront of the educational movements taking place in that county and the state. In 1854, when the county superintendency was established, he was invited to the office in Lancaster County, and he administered its affairs with intelligence and efficiency, holding institutes and endeavoring to improve the qualifications of teachers. He was instrumental in organizing the state normal school at Millersville and was its principal for eleven years. In 1852, he was one of the founders of the Pennsylvania State Teachers' Association, the chairman of its first executive committee and, in 1856, its president.

In 1857, he was one of the active organizers of the National Teachers' Association and, in 1865, was elected president of this association. He assisted in the organization of the National Council of Education in 1880 and was chairman of its executive committee. In 1863, on the urgent appeal of Governor Curtin, Dr. Wickersham raised a full regiment of volunteers for the war, from the teachers of Lancaster County, and commanded the same for several months. In 1866, he was appointed State Superintendent of Public Instruction and held that office for fifteen years, securing radical reform in the school system of the state. He was for ten years editor of the *Pennsylvania School Journal* and wrote for other periodicals. He also wrote several volumes, among which are "School Economy," "Methods of Instruction," and "Methods of Culture," designed specially for teachers.

He was appointed United States Minister to Denmark by President Arthur, and received his degree of LL. D. from Lafayette College. He became a member of the American Institute of Instruction in 1865 and took an interest in its meetings when he could attend. He was one of the most distinguished citizens of his native state, bringing to the different offices which he held varied talent and a devotion of service free from all pretense or show, which won the respect and esteem of all who knew him. He attained eminence as an educator and was an example of what may be accomplished by indomitable perseverance. In the later years of his life, he had given much of his time to the various financial institutions, industrial establishments, asylums, colleges, companies, and boards, with which he was officially connected, enjoying excellent health until a few days before his death, which occurred in March last.

REV. CHARLES VINAL SPEAR.

Rev. Charles Vinal Spear, son of Nathaniel and Esther (Dyer) Spear was born at East Randolph (Holbrook), Mass., March 13, 1825. He graduated from Amherst College in 1846 and at once began teaching in the Young Ladies' Institute at Pittsfield, Mass., studying theology at the same time with Dr. John Todd. From 1852 to 1855, he was pastor of the church at Sudbury, Mass. In the latter year, he returned to Pittsfield and was soon in sole charge of the Maplewood Institute, a position which he held for

nearly twenty-eight years, or until declining health compelled him to retire, in 1883.

He had for a long time taken a deep interest in the college at Oberlin, Ohio, and while recovering from nervous prostration made his way to that place. Here, in time, he erected at a cost of some \$30,000 a fine library building, which he donated to the college. He afterwards gave more than \$16,000 in addition, for a library fund. As his health improved, he took active part in college work and was at the head of the movement to establish a manual training school for Oberlin and was also deeply concerned in the proposed home for missionary children. He was active in local town affairs and in matters relating to the progress of the college. One who knew him well says: "Oberlin came to love and honor him."

Mr. Spear was deeply interested in education and left his impress on thousands of students, many of whom are now laboring in foreign mission fields. He was himself a generous contributor to the missionary boards and societies and a special friend of the feebler colleges.

He married, in 1851, Miss Relief L. Holbrook. She died in 1883, and in 1887 he married Mrs. Mary A. Ring, who for many years was a teacher in Springfield, Mass. He became a member of the American Institute of Instruction in 1867, was for a time one of its vice presidents, and with his wife attended its meetings. He had been making a prolonged tour of Europe, Egypt, and Palestine and was traveling in the east when stricken with the disease which terminated his life at Constantinople, May 10, 1891. He had no children; but his wife and her daughter were with him at the time of his death.

REV. DANIEL LEACH.

Rev. Daniel Leach, D. D., LL. D., son of Apollos and Chloe Leach, was born in Bridgewater, Mass., June 12, 1806. He prepared for college at the Bridgewater Academy, entered Brown University in 1825, and graduated in 1830, taking an additional year on account of ill health. In college he was proficient in mathematics and had a marked knowledge of the ancient languages, his special fondness for Hebrew leading him to continue its study after leaving the university.

He studied divinity two years at Andover, Mass., and one year with Bishop Griswold, by whom he was ordained an Episcopal clergyman in 1833. He was settled at Quincy, Mass., for five years and then retired from the rectorship and became principal of the classical school at Roxbury. After being in this position for four years, he opened a private school, which he taught for six years with eminent success.

From 1848 to 1855, he was an agent of the Massachusetts State Board of Education, being associated with Dr. Barnas Sears, then Secretary of the Board. While in this office, he presented a report upon an improved system of ventilation for school houses, devised by himself, which was widely introduced. In 1855, he went to Providence, R. I., succeeding Prof. S. S. Greene as Superintendent of Public Schools, and held the office for more than twenty-nine years, resigning in 1884. In 1870, he was elected a member of the Rhode Island Board of Education and, in 1877, a trustee of Brown University for life. He was for more than twenty years a vice president and director of the Rhode Island Institute of Instruction and for thirty-four years a vice president of this body, the American Institute of Instruction, which he joined in 1840, more than fifty years ago. He received the degree of D. D. from Brown University in 1875.

He married Mary H. Lawton, May 19, 1834. He had three children, a daughter that died in infancy and a son and daughter who survive him. His wife died July 2, 1879. He died at the residence of his daughter in Providence, May 16, 1891.

He was a true friend, a wise counselor, and a conscientious worker in the various positions which he occupied. A gentleman in official position, who had frequent intercourse with him for twenty-five years, says: "One of his characteristics, most deeply impressed upon those who knew him best, was his rare good sense in all affairs of every day life. He was one of the best advisers I ever knew and stood by his friends till the last." He was beloved as a teacher, respected as a school officer, and esteemed by those who knew him well. He prepared a series of directions for teachers of primary and intermediate schools and, besides official reports and papers, published an arithmetic, a speller, and a manual of geography which have been extensively used.

The world is better for the work, the example, and the lives of all these followers of the Great Teacher; and, as they pass on before us, we seem to hear Him say to each: "Well done, good and faithful servant. Enter thou into the joy of thy Lord."

DAVID N. CAMP,
JAMES S. BARRELL,
JAMES A. PAGE,

Committee on Necrology.

President Huling said that time would not permit the discussion of the report and introduced Calvin M. Woodward, A. M., Professor of Mathematics in Washington University and Principal of the Manual Training School, St. Louis, Mo., who read a paper on "THE BEST ORGANIZATION FOR A MANUAL TRAINING SCHOOL IN AN URBAN COMMUNITY."

The discussion of this paper was opened by Mr. Benjamin Baker, Superintendent of Schools, Newport, R. I.

President Huling stated that the time allotted for the discussion of this subject had expired, but the Institute might by vote allow time for further discussion.

Mr. Charles W. Parmenter, of Cambridge, Mass., thought it decidedly unfair to take the time from those who had prepared papers and give it to the discussions. This was the sense of the Institute, and it was voted not to continue the discussion.

After an intermission of two minutes, Rev. William De Witt Hyde, D. D., President of Bowdoin College, Brunswick, Maine, was introduced and read a paper on "THE EDUCATION OF THE WILL."

The discussion of this theme was opened by Mr. Thomas M. Balliet, Superintendent of Schools, Springfield, Mass.

Dr. Paul H. Hanus, of Cambridge, Mass., continued the discussion.

President Huling called Mr. Thomas B. Stockwell, of Providence, R. I., to take the chair.

Mr. Stockwell called upon Pres. Merrill E. Gates, of Amherst College, Amherst, Mass., to continue the discussion which he did, very eloquently.

At the conclusion of President Gates's remarks, Mr. Stockwell said that the discussion could no more fittingly end than with the words of the distinguished gentleman and scholar, President Gates, and with these words, he declared the discussion closed.

Mr. Thomas H. Barnes, of Boston, Chairman of the Committee on Nominations, reported a list of officers for 1891-92. He said that the Assistant Secretary had refused to allow his name to be used for a reelection. Excepting this change and a few changes in the list of Vice Presidents, the same officers were proposed for reelection, as served last year.

The Assistant Secretary, Mr. Herbert H. Bates, was asked to cast the ballot. This being done, the officers nominated were declared elected.

[The list of officers of the Institute, with the Constitution and list of active members, will be found in the pages following this "Journal of Proceedings" and preceding the Addresses.]

After the election of officers for 1891-92, President Huling resumed the Chair and announced the total attendance upon this meeting to be 887, as follows:

Maine,	47	or	5.3 per cent.
New Hampshire,	97	"	10.9 "
Vermont,	27	"	3.2 "
Massachusetts,	536	"	60.4 "
Rhode Island,	56	"	6.4 "
Connecticut,	65	"	7.3 "
Elsewhere,	59	"	6.5 "
Total,	887	"	100 "

Rev. William De Witt Hyde, D. D., Chairman of the Committee on Resolutions, read the report of that committee, which was accepted.

The following are the Resolutions adopted :

I. APPRECIATION AND THANKS.

Resolved, That the thanks of the American Institute of Instruction are due and are hereby tendered to the several railroads that have afforded liberal reduction in rates of fare to its members; to the proprietors of the several hotels and boarding-houses in Bethlehem for personal courtesies and favorable prices; to the local committee which has made so ample provision for our meetings; to the several speakers and classes for the able addresses and admirable illustrations that have made our sessions so profitable and pleasant; and, lastly, to the Schubert Quartette and Mrs. Eugene C. Webster for the very attractive and enjoyable additions they have made to the programmes of our sessions.

II. UNIVERSITY TEACHERS' COURSES.

Resolved, That we regard with appreciation and heartily endorse the establishment of courses for the instruction of teachers at our leading universities. The great demand for the training of teachers for our secondary schools has here been met. The proposed union of theoretical and practical professional training gives promise of permanent and far-reaching influence for good in secondary and higher education. We, therefore, pledge to it our active interest and cooperation.

III. PHYSICAL EDUCATION.

Resolved, That we have listened with peculiar gratification to the discussion of the subject of physical education and cordially endorse that educational movement, so noticeable at the present time, which is directed toward the more perfect development of the physical powers. We are convinced that a judicious system of bodily exercises will promote, not only the health and physical vigor of our children, but also their moral and intellectual well-being.

IV. QUALITY, NOT QUANTITY.

Resolved, That in order to secure the harmonious development of mind and will, knowledge and power, quality of work wrought out in exercises, rather than quantity of facts retained in memory, should be the object of study, the aim of instruction, and the subject-matter of examination.

WILLIAM DEWITT HYDE,
LEMUEL S. HASTINGS,
A. H. CAMPBELL,
PAUL H. HANUS,
H. S. TARBELL,
C. L. CAMP,

Committee on Resolutions.

Mr. M. Grant Daniell read a further report of the Committee on Membership, proposing candidates for active membership. They were elected. Their names appear in the full list.

President Huling announced that the photographer wished to try again for a picture of the members of the Institute, directly after the morning session.

The Secretary read a recommendation from the Board of Directors, unanimously proposing for adoption by the Institute the following amendments to the constitution :—

1. To strike out of Article V, Sec. 3, the words "that shall be present at the annual meeting" and to add the words "and to

remit the payment thereof, when in their judgment it may seem wise to do so."

2. To add to Art. II the clause: "Any active member, who shall for the period of one year neglect to pay the annual assessment, shall by such neglect forfeit his membership."

3. To add to Art. II, Sec. 4, after the word "member" the words "for the current year."

After some discussion of the proposed changes in the constitution, it was voted to take up the amendments and act upon them separately.

The first one was carried, 44 members voting for and none against it. The second one was carried, 44 voting for and no one against it. The third one was carried, 44 voting for and no one against it.

The constitution was declared amended.

Mrs. Eugene C. Webster read "Aunt Tabitha," by Oliver Wendell Holmes.

President Huling appointed Geo. A. Walton, Thomas B. Stockwell, and C. W. Hill to act temporarily as Finance Committee to approve bills, etc., in the absence of the regular Finance Committee.

The Institute adjourned.

FOURTH DAY—Thursday, July 9.

EVENING SESSION.

The Institute assembled for its last session, in the Casino. The Schubert Quartette was heartily cheered as it stepped before the audience and sang "The Letter," by Hatton. The concert given by them at 3 o'clock had been a grand success, and all were glad to greet them again. Encored with a round of

applause, they sang "Old Mother Hubbard," by Keach.

Mrs. Eugene C. Webster in her happy manner read "The Day of Judgment," by Elizabeth Stuart Phelps, which was heartily applauded. In response, she read "Anne Hathaway" with telling effect.

The Quartette sang "Three Fishers," by Goldbeck.

President Huling then introduced Edmund J. James, Ph. D., Professor of Finance and Administration in the Wharton School of Finance and Economy, connected with the University of Pennsylvania, who read an address on "THE SOCIAL AND ECONOMIC ASPECT OF EDUCATION."

Mr. M. Grant Daniell, Chairman of the Committee on Membership, proposed for active membership a supplementary list of candidates. The candidates named were elected. The active members elected during the sessions of this Annual Meeting are designated by italics in the list of all the active members of the Institute, to be found in the pages following this "Journal of Proceedings" and preceding the Addresses.

President Huling read a letter, which he had received, the writer tendering to the American Institute of Instruction a check for one hundred dollars and expressing hearty and earnest recognition of the excellent work done by the Institute for the cause of Education. The donor's name was withheld, although it was vigorously called for, the President stating that he was not at liberty to give it.

This meeting of the American Institute of Instruction will long be remembered, said President Huling,

by the Board of Directors, for their frequent and lengthy sessions, if for no other reason. He then announced another meeting of that Board directly after adjournment.

For her last recitation, Mrs. Eugene C. Webster, read "Lady Wentworth," from Longfellow.

President Huling said that it was with an element of sadness that he introduced for the last time the Schubert Quartette, to close the meetings as they were begun. The Quartette, as the concluding strains of a most harmonious and profitable meeting, sang a "Waltz," by Vogel; and President Huling declared the Sixty-Second Annual Meeting of the American Institute of Instruction

ADJOURNED.

DIRECTORS' MEETING.

After the adjournment of the Institute, the customary meeting of the Board of Directors was held, in the Casino. The following standing committees were appointed:

Finance.

G. A. Walton, W. Newton, Mass.,
T. B. Stockwell, Providence, R. I.,
C. W. Hill, Boston, Mass.

Membership.

M. G. Daniell, Boston, Mass.,
F. F. Barrows, Hartford, Conn.,
A. H. Campbell, Johnson, Vt.,
With the President, Secretary, and Treasurer.

Necrology.

D. N. Camp, New Britain, Conn.,
J. S. Barrell, Cambridge, Mass.,
J. A. Page, Boston, Mass.

Printing Volume.

Ray Greene Huling, New Bedford, Mass.,
Augustus D. Small, Boston, Mass.,
James W. Webster, Malden, Mass.

Committee of Arrangements for the Annual Meeting of 1892.

Ray Greene Huling, 195 Cottage St., New Bedford, Mass.,
Augustus D. Small, 67 Ashford St., Allston, Mass.,
James W. Webster, 588 Main St., Malden, Mass.,
Charles W. Parmenter, 19 Fayette St., Cambridgeport, Mass.,
Henry Whittemore, 34 Appleton St., Waltham, Mass.

CONSTITUTION
OF THE
AMERICAN INSTITUTE OF INSTRUCTION,

Adopted August, 1870, as a substitute for the older one,
and amended July, 1886, and July, 1891.

PREAMBLE.

We, whose names are hereunto subjoined, pledging our zealous efforts to promote the cause of popular education, agree to adopt the following Constitution.

ARTICLE I.—NAME.

The society shall be known by the title of the American Institute of Instruction.

ARTICLE II.—MEMBERS.

1. The members of this Institute shall be divided into three classes, styled active, associate, and honorary.
2. Any person interested in the cause of education and recommended by the Committee on Membership may become an active member by a major vote of the members present and voting at any regular meeting.
3. Only active members shall be empowered to vote and hold office.
4. Any active member, who shall for the period of one year neglect to pay the annual assessment, shall by such neglect forfeit his membership.
5. Any person of good moral character may become an associate member for the current year by paying the annual assessment.
6. Honorary members may be elected by the Institute on recommendation of two thirds of the Directors present at any stated meeting of the Board.

ARTICLE III.—MEETINGS.

1. The Annual Meeting shall be held at such time and place as the Board of Directors shall appoint.
2. Special meetings may be called by the Directors.
3. Due notice of the meetings of the Institute shall be given in the public journals.

ARTICLE IV.—OFFICERS.

1. The officers of the Institute shall be a President, Vice-Presidents, a Secretary, an Assistant Secretary, a Treasurer, an Assistant Treasurer, and twelve Counsellors, all of whom shall constitute a Board of Directors.
2. The officers shall be elected annually by ballot and shall continue in office till their successors shall be chosen.

ARTICLE V.—DUTIES OF OFFICERS.

1. The Secretary shall give notice of all meetings of the Institute and of the Board of Directors and shall keep a record of their transactions.
2. The Treasurer shall collect and receive all moneys of the Institute and shall render an accurate statement of his receipts and payments annually, and whenever called upon by the Board of Directors, to whom he shall give such bonds for the faithful performance of his duty as they shall require. He shall make no payment, except by order of the Finance Committee of the Board.
3. The Board of Directors shall devise and carry into execution such measures as may promote the general interests of the Institute, shall have charge of the property of the Institute, shall be authorized to publish its proceedings and such papers relating to education as may seem to them desirable. They shall have power to fill all vacancies in their Board, from members of the Institute, and make By-Laws for its government. They shall have power to vote an annual assessment of one dollar upon the members, except honorary members, and to remit the payment thereof, when in their judgment it may seem wise to do so. They shall annually elect the following standing committees:
 - (1) A committee of three, who with the President, Secretary,

and Treasurer shall constitute the Committee on Membership, whose duty it shall be to report to the Institute, from time to time, the names of such persons as they may recommend for membership;

(2) A committee of three on Finance, whose duty it shall be to audit the accounts of the Treasurer and, under the control of the Board of Directors, to draw orders on the Treasurer for the payment of charges against the Institute.

(3) A committee of three on Necrology.

4. Stated meetings of the Board shall be held on the first Saturday in January and on the first day of the Annual Meeting of the Institute.

ARTICLE VI.—BY-LAWS AND AMENDMENTS.

1. By-Laws not repugnant to this Constitution may be adopted at any regular meeting.

2. This Constitution may be altered or amended by a vote of two thirds of the members present at the Annual Meeting, provided two thirds of the Directors present at a stated meeting shall agree to recommend the proposed alteration or amendment.

BY-LAWS.

1. At all meetings of the Board of Directors, seven members shall be necessary to constitute a quorum to do business.

2. It shall be the duty of the Secretary, on application of any two Directors, to call special meetings of the Board at such time and place as the President may appoint.

3. Before each Annual Meeting, the Treasurer shall have printed certificates of membership, numbered consecutively from one upward. These certificates shall be attached to stubs having the corresponding numbers printed thereon. The book of stubs left after the certificates of membership are detached therefrom shall form a part of the Treasurer's account, to be delivered to the Finance Committee, for the purpose of auditing the accounts of the Institute.

OFFICERS
OF THE
AMERICAN INSTITUTE OF INSTRUCTION.
1891-92.

President—Ray Greene Huling,
195 Cottage St., New Bedford, Mass.
Secretary—Augustus D. Small,
67 Ashford St., Allston, Mass.
Treasurer—James W. Webster,
588 Main St., Malden, Mass.
Assistant Secretary—Charles W. Parmenter,
19 Fayette St., Cambridgeport, Mass.
Assistant Treasurer—Henry Whittemore,
34 Appleton St., Waltham, Mass.

Vice Presidents—MAINE.

W. J. Corthell, Gorham.	O. W. Lord, Portland.
H. M. Estabrook, Orono.	G. C. Purrington, Farmington.
G. B. Files, Lewiston.	A. F. Richardson, Castine.
R. E. Gould, Biddeford.	E. P. Sampson, Saco.
James H. Hanson, Waterville.	N. A. Sargent, Hebron.
Mary E. Hughes, Castine.	Albion W. Small, Waterville.
Wm. DeWitt Hyde, Brunswick.	W. W. Stetson, Auburn.
L. G. Jordan, Lewiston.	G. A. Stuart, Lewiston.

NEW HAMPSHIRE.

William E. Buck, Manchester.	D. G. Miller, Meriden.
C. H. Clark, Kingston.	Charles H. Morss, Portsmouth.
Channing Folsom, Dover.	John Pickard, Portsmouth.
Amos Hadley, Concord.	Charles C. Rounds, Plymouth.
L. S. Hastings, Nashua.	S. J. Rundlett, Concord.
John K. Lord, Hanover.	J. H. Willoughby, Nashua.

OFFICERS.

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VERMONT.

M. H. Buckham, Burlington.	S. W. Landon, Burlington.
A. H. Campbell, Johnson.	Edwin F. Palmer, Waterbury.
Edward Conant, Randolph.	G. A. Williams, Saxton's River.
A. L. Hardy, St. Johnsbury.	

MASSACHUSETTS.

George I. Aldrich, Quincy.	Charles W. Hill, Boston.
Sarah J. Baker, Boston.	J. M. Hill, Hyde Park.
Thomas M. Balliet, Springfield.	Eli A. Hubbard, Hatfield.
Thomas H. Barnes, Boston.	Ellen Hyde, Framingham.
Herbert H. Bates, Cambridge.	Daniel W. Jones, Boston.
Albert G. Boyden, Bridgewater.	Charles F. King, Boston.
W. F. Bradbury, Cambridge.	John Kneeland, Boston.
O. B. Bruce, Lynn.	George H. Martin, Lynn.
I. N. Carleton, Bradford.	Samuel W. Mason, Chelsea.
W. A. Clark, Jr., Lynn.	A. D. Mayo, Boston.
Francis Cogswell, Cambridge.	Robert C. Metcalf, Boston.
M. Grant Daniell, Boston.	A. E. Nölen, Fitchburg.
Justus Dartt, Whately.	John O. Norris, Melrose.
E. H. Davis, Chelsea.	Hiram Orcutt, Boston.
John W. Dickinson, Newton.	James A. Page, Boston.
Larkin Dunton, Boston.	Alvin F. Pease, Northampton.
S. T. Dutton, Brookline.	John T. Prince, Newton.
W. E. Eaton, Reading.	W. A. Robinson, Boston.
Joseph G. Edgerly, Fitchburg.	Charles P. Rugg, New Bedford.
A. W. Edson, Worcester.	E. D. Russell, Waltham.
A. M. Edwards, Pittsfield.	Edwin P. Seaver, Newton.
Thomas Emerson, Newton.	William E. Sheldon, Newton.
Geo. T. Fletcher, Northampton.	E. P. Sherburne, Brookline.
Homer T. Fuller, Worcester.	Elbridge Smith, Boston.
Arthur L. Goodrich, Salem.	G. A. Southworth, Somerville.
E. J. Goodwin, Newton.	A. P. Stone, Springfield.
J. C. Greenough, Westfield.	E. Norris Sullivan, Boston.
D. B. Hagar, Salem.	John Tetlow, Boston.
C. P. Hall, Winchendon.	W. W. Waterman, Clinton.
H. C. Hardon, Newton.	O. S. Williams, Dedham.
Wm. E. Hatch, New Bedford.	A. E. Winship, Somerville.

OFFICERS.

RHODE ISLAND.

W. N. Ackley, Narragansett Pier.	L. H. Meader, Providence.
Dwight R. Adams, Centreville.	Joseph E. Mowry, Providence.
E. B. Andrews, Providence.	J. M. Nye, Phenix.
Benj. Baker, Newport.	Wm. T. Peck, Providence.
Geo. E. Church, Providence.	Levi W. Russell, Providence.
Sarah E. Doyle, Providence.	Jas. N. Sawin, Providence.
Albert Harkness, Providence.	Thos. B. Stockwell, Providence.
E. H. Howard, Providence.	Horace S. Tarbell, Providence.
D. W. Hoyt, Providence.	W. E. Wilson, Providence.
H. M. Maxson, Pawtucket.	

CONNECTICUT.

C. L. Ames, Plantsville.	J. A. Graves, Hartford.
Henry Barnard, Hartford.	H. M. Harrington, Bridgeport.
F. F. Barrows, Hartford.	C. D. Hine, Hartford.
J. D. Bartley, Bridgeport.	Dwight Holbrook, Clinton.
N. L. Bishop, Norwich.	Charles Northend, New Britain.
D. N. Camp, New Britain.	B. G. Northrup, Clinton.
L. L. Camp, New Haven.	Henry D. Simmons, Bridgeport.
C. F. D. Carroll, New Haven.	W. I. Twitchell, Hartford.
Ella A. Fanning, Norwich.	

ELSEWHERE.

Geo. J. Cummings, Washington, D. C.
 John Eaton, Marietta, O.
 William T. Harris, Washington, D. C.
 W. S. Montgomery, Washington, D. C.
 Thomas J. Morgan, Washington, D. C.
 George Crosby Smith, Carmel, N. Y.
 H. P. Warren, Albany, N. Y.

COUNSELLORS.

James S. Barrell, Cambridge, Mass.
 Thos. W. Bicknell, Boston, Mass.
 J. Milton Hall, Providence, R. I.
 Frank A. Hill, Cambridge, Mass.
 Geo. A. Littlefield, Providence, R. I.
 A. J. Manchester, Providence, R. I.

OFFICERS.

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Albert P. Marble, Worcester, Mass.
William A. Mowry, Boston, Mass.
James W. Patterson, Hanover, N. H.
E. R. Ruggles, Hanover, N. H.
Benjamin F. Tweed, Cambridge, Mass.
George A. Walton, Cambridge, Mass.

ACTIVE MEMBERS

OF THE

AMERICAN INSTITUTE OF INSTRUCTION.

[NOTE. *Italics* designate members elected at the Annual Meeting of 1891. Names of women are preceded by the proper title.]

- Alba R. Abbott*, Providence, R. I. Nathaniel P. Banks, Waltham, Mass.
W. N. Ackley, Warren, R. I. Mass.
Dwight R. Adams, Centreville, R. I. Henry Barnard, Hartford, Conn.
W. P. Adams, Boston, Mass. *Thomas H. Barnes*, Boston, Mass.
George I. Aldrich, Quincy, Mass. Mass.
William R. Alger, Boston, Mass. *Miss Jennie S. Barney*, Canaan, N. H.
J. W. Allen, Medfield, Mass. N. H.
Nathaniel T. Allen, Newton, James S. Barrell, Cambridge, Mass.
Valentine Almy, Tiverton Town F. F. Barrows, Hartford, Conn.
Corners, R. I. *Miss Cora V. Bartlett*, Cincinnati, Ohio.
C. L. Ames, Plantsville, Conn. Ohio.
E. Benjamin Andrews, Providence, R. I. J. D. Bartley, Bridgeport, Conn.
Cyrus A. Bartol, Boston, Mass.
J. B. Angell, Ann Arbor, Mich. Wm. Bascom, Williamstown, Mass.
M. F. Atwood, Chelsea, Mass. Mass.
Miss Etta Bates, No. Scituate, Mass.
Mark Bailey, New Haven, Conn. Mass.
Miss Myra H. Baker, Phillipston, *Herbert H. Bates*, Cambridge, Mass.
Mass.
Miss Sarah J. Baker, Boston, *Miss F. S. Beane*, Davenport, Iowa.
Mass.
Thomas M. Balliet, Springfield, David Beattie, Troy, N. Y.
Mass. E. Belknap, Whitehall, N. Y.

ACTIVE MEMBERS.

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- Thomas W. Bicknell, Boston, I. N. Carleton, Bradford, Mass.
 Mass. *Miss Mary Carpenter*, Seekonk,
 N. L. Bishop, Hartford, Conn. Mass.
Clarence E. Blake, Springfield, C. F. Carroll, New Britain, Conn.
 Mass. Thomas Chace, Providence, R. I.
W. L. P. Boardman, Milton, Mass. *A. A. Champney*, Whitman,
Miss Nellie E. Boyd, Chelsea, Mass.
 Mass. Henry L. Chase, Lynn, Mass.
 Albert G. Boyden, Bridgewater, Albion E. Chase, Portland, Me.
 Mass. George E. Church, Providence,
 Miss Anna C. Bracket, New R. I.
 York City, N. Y. C. H. Clark, Kingston, N. H.
 Wm. F. Bradbury, Cambridge, *W. A. Clark, Jr.*, Lynn, Mass.
 Mass. Charles C. Coffin, Boston, Mass.
David H. Brown, W. Medford, Francis Cogswell, Cambridge,
 Mass. Mass.
 Moses T. Brown, College Hill, Wm. C. Collar, Boston, Mass.
 Mass. Edward Conant, Randolph, Vt.
 O. B. Bruce, Lynn, Mass. W. J. Corthell, Gorham, Me.
 Wm. H. Buck, Manchester, N. H. O. W. Cook, Swampscott, Mass.
 M. H. Buckham, Burlington, Vt. *Henry S. Cowell*, Ashburnham,
N. H. Bull, Oneonta, N. Y. Mass.
Miss Mary Bull, Oneonta, N. Y. *J. H. Cozens*, Newport, R. I.
Alfred Bunker, Boston, Mass. *Lewis W. Craig*, Merrimac,
Miss Alice M. Burbank, Webster, Mass.
 N. H. George J. Cummings, Washing-
Miss Alice E. Burgess, E. Orange, ton, D. C.
 N. J. *Miss Mary E. Curtis*, Marlboro,
 Nicholas Murray Butler, New Mass.
 York City, N. Y. *W. W. Curtis*, Pawtucket, R. I.
 Hezekiah Butterworth, Boston, Thomas Cushing, Boston, Mass.
 Mass. Frederick S. Cutter, Cambridge,
 Mass.
 N. A. Calkins, New York City, *Sanford L. Cutter*, Hatfield, Mass.
 N. Y.
 D. N. Camp, New Britain, Conn. *D. P. Dame*, Littleton, N. H.
 L. L. Camp, New Britain, Conn. M. Grant Daniell, Boston, Mass.
 A. H. Campbell, Johnson, Vt. Justus Dartt, Springfield, Mass.
Miss Emma Carbee, Woodsville, *Miss Mary Davenport*, Brooklyn,
 N. H. N. Y.

- Miss Eliza A. Davis*, Lowell, *Miss A. M. Gamwell*, Providence, R. I.
 Mass.
 E. H. Davis, Chelsea, Mass. *Merrill E. Gates*, Amherst, Mass.
B. C. Day, No. Craftsbury, Vt. *Miss Annie E. George*, Newton,
 J. DeBore, Montpelier, Vt. Mass.
Q. E. Dickerman, Boston, Mass. H. H. George, Beaver Falls,
 John W. Dickinson, Newton, Penn.
 Mass.
 A. E. Dolbear, College Hill, Miss Jane E. Gilmore, New Bedford, Mass.
 Mass.
 Miss Sarah E. Doyle, Providence, Arthur L. Goodrich, Salem, Mass.
 R. I. E. J. Goodwin, Newton, Mass.
 Larkin Dunton, Boston, Mass. E. R. Goodwin, Manchester,
 S. T. Dutton, Brookline, Mass. N. H.
 R. E. Gould, Biddeford, Me.
Geo. T. Eaton, Andover, Mass. J. A. Graves, Hartford, Conn.
 John Eaton, Marietta, Ohio. J. M. Greene, Long Branch, N. J.
 W. E. Eaton, Reading, Mass. J. C. Greenough, Westfield, Mass.
 Joseph G. Edgerly, Fitchburg, Miss Eliza H. Gutterson, Lynn,
 Mass. Mass.
 A. W. Edson, Worcester, Mass.
 Richard Edwards, Springfield, Amos Hadley, Concord, N. H.
 Mass. Daniel B. Hagar, Salem, Mass.
 A. M. Edwards, Lewiston, Me. *C. P. Hall*, Winchendon, Mass.
 Charles W. Eliot, Cambridge, G. Stanley Hall, Worcester,
 Mass. Mass.
 Samuel Eliot, Boston, Mass. J. Milton Hall, Providence, R. I.
 Thomas Emerson, Newton, Mass. James H. Hanson, Waterville,
 H. M. Estabrook, Gorham, Me. Me.
Paul H. Hannus, Cambridge,
 G. B. Files, Augusta, Me. Mass.
 George T. Fletcher, Marlboro, Henry C. Hardon, Newton,
 Mass. Mass.
 Channing Folsom, Dover, N. H. A. L. Hardy, St. Johnsbury, Vt.
Miss S. Edith Fowler, Short Albert Harkness, Providence,
 Falls, N. H. R. I.
Miss Vesta G. Fowler, Short H. M. Harrington, Bridgeport,
 Falls, N. H. Conn.
 Homer T. Fuller, Worcester, Wm. T. Harris, Washington,
 Mass. D. C.

ACTIVE MEMBERS.

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- Edward M. Hartwell*, Boston, *Isaac Huse, Jr.*, Salt Lake City, Mass. Utah.
- Lemuel S. Hastings, Claremont, Miss Eliza M. Hussey, Cambridge, Mass.
- William E. Hatch, New Bedford, Miss Ellen Hyde, Framingham, Mass.
- Miss W. W. Hayward*, Providence, R. I. *Wm. DeWitt Hyde*, Brunswick, Me.
- D. C. Heath*, Boston, Mass.
- R. G. Hibbard, New Britain, Conn. *Edmund J. James*, Phila., Penn.
- Charles W. Hill, Boston, Mass. *Miss Jeannie L. Jillson*, Providence, R. I.
- Frank A. Hill, Cambridge, Mass. *F. L. Johnson*, Spencer, Mass.
- Jere. M. Hill, Hyde Park, Mass. Daniel W. Jones, Boston, Mass.
- Thomas Hill, Portland, Me. L. G. Jordan, Lewiston, Me.
- C. D. Hine, Hartford, Conn.
- Miss Bertha W. Hintz, Boston, Mass. *H. W. Keach*, Valley Falls, R. I.
- J. M. Hitt, Northfield, Vt. N. Y.
- L. F. Hobbs*, W. Medford, Mass. Charles F. King, Boston, Mass.
- Dwight Holbrook, Clinton, Conn. John Kneeland, Boston, Mass.
- Miss Lena Holmes*, Kingston, Mass. *H. B. Knox*, Palmer, Mass.
- Irving W. Horne*, Chelsea, Mass. H. O. Ladd, Santa Fe, New Mexico.
- Geo. T. Houghton*, Auburndale, Mass. Wm. H. Ladd, Boston, Mass.
- E. H. Howard, Providence, R. I. S. W. Landon, Burlington, Vt.
- Mrs. Julia Ward Howe, Boston, Mass. *W. C. Lawton*, Brunswick, Me.
- D. W. Hoyt, Boston, Mass. *Miss Caroline B. LeRow*, Brooklyn, N. Y.
- Eli A. Hubbard, Hatfield, Mass. Hosea H. Lincoln, Boston, Mass.
- Miss Cora I. Hudson*, Providence, R. I. George A. Littlefield, Newport, R. I.
- Miss Mary E. Hughes, Castine, Me. Mrs. Mary A. Livermore, Melrose, Mass.
- Ray Greene Huling, New Bedford, Mass. *C. S. Locke*, W. Dedham, Mass.
- Harrison Hume*, Boston, Mass. John K. Lord, Hanover, N. H.
- F. D. Huntington, Syracuse, N. Y. L. C. Lord, Moorhead, Minn.
- George B. Loring, Salem, Mass.

- A. J. Manchester, Providence, W. H. Niles, Cambridge, Mass.
 R. I. A. Eugene Nolen, Fitchburg,
 Albert P. Marble, Worcester, Mass.
 Mass. *I. M. Norcross*, Weymouth, Mass.
Elias H. Marston, Somerville, John O. Norris, Melrose, Mass.
 Mass. Charles Northend, New Britain,
John P. Marston, Biddeford, Me. Conn.
 George H. Martin, Lynn, Mass. B. G. Northrop, Clinton, Conn.
Thomas Martin, Barton, Vt. J. M. Nye, Phenix, R. I.
 Samuel W. Mason, Chelsea,
 Mass. Hiram Orcutt, Boston, Mass.
H. M. Maxson, Pawtucket, R. I.
 A. D. Mayo, Boston, Mass. Alpheus S. Packard, Salem, Mass.
 Lewis H. Meader, Providence, Miss Eliza S. Paddock, Cam-
 R. I. bridge, Mass.
 C. E. Meleney, Somerville, Mass. James A. Page, Boston, Mass.
 Moses Merrill, Boston, Mass. Mrs. Alice Freeman - Palmer,
 Robert C. Metcalf, Boston, Mass. Cambridge, Mass.
 A. A. Miner, Boston, Mass. *E. F. Palmer*, Waterbury, Vt.
 D. G. Miller, Meriden, Conn. Francis W. Parker, Chicago, Ill.
 Mrs. H. M. Miller, Providence, *Charles W. Parmenter*, Cam-
 R. I. bridgeport, Mass.
Miss Maria C. Mondy, London, *Miss Carrie J. Partenheimer*,
 England. Northampton, Mass.
 W. S. Montgomery, Washington, James W. Patterson, Hanover,
 D. C. N. H.
 Thomas J. Morgan, Providence, Andrew P. Peabody, Cambridge,
 R. I. Mass.
Miss A. W. Morrison, Lawrence, *Miss A. Olive Pearson*, Reading,
 Mass. Mass.
 Edward S. Morse, Salem, Mass. Alvin F. Pease, St. Albans, Vt.
Miss Josie E. Morse, Marlboro, John H. Peck, New Britain,
 Mass. Conn.
 Charles H. Morss, Portsmouth, William T. Peck, Providence,
 N. H. R. I.
 Joseph E. Mowry, Providence, *Miss E. A. S. Pennell*, Brunswick,
 R. I. Me.
 William A. Mowry, Boston, *Josiah H. Penniman*, Philadel-
 Mass. phia, Penn.
 A. B. Muzzy, Cambridge, Mass. A. Perry, Williamstown, Mass.

ACTIVE MEMBERS.

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- Miss Julia E. Phelps*, Northamp- Charles P. Rugg, New Bedford,
ton, Mass. Mass.
- John Pickard, Portsmouth, N. H. George Rugg, New Bedford,
J. L. Pickard, Iowa City, Iowa. Mass.
- Edward C. Pickering, Cambridge, E. R. Ruggles, Hanover, N. H.
Mass. L. J. Rundlett, Concord, N. H.
- A. B. Poland, Jersey City, N. J. J. D. Runkle, Brookline, Mass.
- Miss E. F. Porter*, Somerville, *Eugene D. Russell*, Waltham,
Mass. Mass.
- John T. Prince, Waltham, Mass. Frank T. Russell, Waterbury,
Geo. C. Purrington, Farmington, Conn.
- Me. Levi W. Russell, Providence, R. I.
- Benjamin W. Putnam, Jamaica
Plain, Mass. E. P. Sampson, Saco, Me.
- Granville B. Putnam, Newton, *Benjamin H. Sanborn*, Wellesley,
Mass. Mass.
- John P. Sanborn, Newport, R. I.
- Walter E. Ranger*, Lyndon N. A. Sargent, Hebron, Me.
Centre, Vt. L. Sauveur, New York City, N. Y.
- Miss Elizabeth H. Ray*, North- H. Chapin Sawin, Newton, Mass.
ampton, Mass. James N. Sawin, Providence, R. I.
- Miss Sarah E. Raymond*, Bloom- Henry E. Sawyer, Northfield,
ington, Ill. Mass.
- Charles L. Reed*, Kingston, Mass. J. G. Scott, Westfield, Mass.
- Miss Eva M. Reed*, Hudson, Edwin P. Seaver, Newton, Mass.
Mass. Julius H. Seelye, Amherst, Mass.
- Miss Anna L. Rice*, Springfield, L. Clark Seelye, Northampton,
Mass. Mass.
- W. N. Rice, Middletown, Mass. J. B. Sharland, Boston, Mass.
- Zalmon Richards, Washington, *Frederick T. Sharp*, No. Crafts-
bury, Vt. D. C.
- A. F. Richardson*, Castine, Me. *John J. Sheehan*, Boston, Mass.
- W. A. Robinson, Boston, Mass. Wm. E. Sheldon, Newton, Mass.
- Miss N. J. Rollins*, New Britain *E. P. Sherburne*, Brookline, Mass.
Conn. *Miss Celia Sherman*, Royalton,
Vt.
- Clarence B. Roote*, Northampton, Mass. *Miss Ella Sherman*, So. Kings-
ton, R. I.
- Henry R. Roth*, Marlboro, Mass.
- Charles C. Rounds, Plymouth, *Miss A. E. Shipman*, New Brit-
ain, Conn. N. H.

- Henry D. Simmons*, Bridgeport, Conn. *George H. Tripp*, New Bedford, Mass.
H. E. Slaughter, Hightstown, N. J. *Miss Elizabeth True*, Ellsworth, Me.
Albion W. Small, Waterville, Me. *Miss Edith S. Tufts*, Wellesley, Mass.
Augustus D. Small, Boston, Mass. *Miss Belle Small*, Laconia, N. H. Mass.
Elbridge Smith, Boston, Mass. *Benj. F. Tweed*, Cambridge, Mass.
George C. Smith, Carmel, N. Y. *W. I. Twitchell*, Hartford, Conn.
H. I. Smith, Boston, Mass. *Geo. A. Tyzzer*, Winchester, Mass.
G. A. Southworth, Somerville, Mass. *Miss Mabel E. A. Waite*, Providence, R. I.
Homer B. Sprague, Grand Falls, Dakota. *Isaac Walker*, Pembroke, N. H.
Randall Spaulding, Mont Clair, N. J. *Miss M. Blanche Wallace*, Pembroke, N. H.
Miss Addie H. Spooner, Sugar Hill, N. H. *Geo. A. Walton*, Newton, Mass.
M. C. Stebbins, Vermont (?) *C. A. Wardwell*, Bath, Me.
Wilson S. Steere, Olneyville, R. I. *H. P. Warren*, Albany, N. Y.
W. W. Stetson, Auburn, Me. *W. W. Waterman*, Clinton, Mass.
Eugene C. Webster, E. Providence, R. I.
Admiral P. Stone, Springfield, Mass. *Jas. W. Webster*, Malden, Mass.
J. C. Stockbridge, Providence, R. I. *Miss Mary C. Wells*, New Britain, Conn.
Thos. B. Stockwell, Providence, R. I. *Miss Annie F. Wetherbee*, Marlboro, Mass.
G. A. Stuart, Lewiston, Me. *Miss Imogene Wheeler*, Jersey City, N. J.
Miss J. B. Stuart, Portsmouth, N. H. *Miss Lucy Wheelock*, Boston, Mass.
E. Norris Sullivan, Boston, Mass. *E. E. White*, Cincinnati, Ohio.
Horace S. Tarbell, Providence, R. I. *Henry Whittemore*, Waltham, Mass.
James B. Taylor, Newton, Mass. *Miss Carrie E. Wilcox*, New Britain, Conn.
J. M. Taylor, Poughkeepsie, N. Y. *Miss Annie J. Wilder*, Marlboro, Mass.
John Tetlow, Boston, Mass. *Samuel Thurber*, Boston, Mass.
H. H. Todd, Bridgeport, Conn. *O. S. Williams*, Nashua, N. H.
Miss Mary A. Todd, Lynn, Mass. *J. H. Willoughby*, Nashua, N. H.
H. F. Towle, Brooklyn, N. Y.

ACTIVE MEMBERS.

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Geo. A. Williams, Saxton's River, *George Willard Wood*, Lewiston,
Vt. Me.
A. E. Winship, Somerville, Mass. *John C. Worcester*, W. Boylston,
A. E. Wilson, Providence, R. I. Mass.
Allen F. Wood, New Bedford,
Mass. E. Bentley Young, Boston, Mass.



ADDRESSES.



I.

VOCATION VERSUS CULTURE; OR THE TWO ASPECTS OF EDUCATION.

BY HON. WILLIAM T. HARRIS, LL. D., U. S. COMMISSIONER OF EDUCATION, WASHINGTON, D. C.

The teacher is by vocation one of the most conservative of men. In this respect, he is surpassed only by the clergyman and the lawyer. He is one of the three persons appointed by society to preserve its institutions. It is necessary for the social whole to store up the fruits of its experiments and save what it has learned regarding the best manner of living. This experience is embodied in laws, civil and criminal, which give proper forms of doing important things and define what is not to be done. The lawyers have the guardianship of this priceless heritage of the past, and it is their vocation to settle the application of those forms to practical life.

But the frame-work of laws and the constitution of government are not the only precious things which society wishes to preserve. There are more fundamental things even than these. The insight attained by the wisest men—by the prophets and seers of the human race—into the nature of the Great Power that is creating and governing the world—this insight furnishes the deeper basis of the conduct of life, and, in order that no part of the revelation of the sacred doctrine may be lost or forgotten, society trains up and

consecrates a special class of men to this service of guarding the purity of the oracles of religion and imparting them to men.

The lawyers are conservative, because their whole business is to make the affairs of every-day life square with the forms prescribed in the statute book.

But the clergy are still more conservative, because they have to deal with fundamental convictions of the race or people which do not belong to the class of matters of opinion or individual views, but are rather matters of supreme authority. The work of religious teachers is chiefly that of educating the people into an abiding respect for the authority of these oracles. For religion is nothing without faith in authority. Hence the clergy are the most conservative portion of society, and woe betide society were this otherwise.

But the school teacher comes next, I think, in the order of the conservative ranks in the community. It is remarked that women are more conservative than men. We should expect this, because the characteristic vocation of woman in the family is the rearing or nurture of children. The child begins life a savage, ignorant of civilization. He must be taught everything: how to take care of his person, how to behave in the presence of others, how to do his work in the world and earn an honest living, how to observe, and how to think. He has to learn the view of the world which the civilization has attained. The woman as mother has this work of rearing the child into an observance of these forms of civilized habit. These forms of habit are not written out in statute books and interpreted by a caste of lawyers. They are so subtle that it would be difficult to write them

out. They consist of a mass of punctilios and ceremonies, formalities and usages, which consist partly in action and partly in refraining from action. The action of the will in refraining from action is called by the technical term of inhibition. The good mother is always on the alert to see to it that her child learns to inhibit—learns self-control or self-restraint. Out of one thousand things he may do, nine hundred and ninety and nine are improper to be done, and he must refuse to adopt them. Passing by all these, he must do only the one thing proper.

The child who followed every impulse of nature just as the animal does without inhibiting could not live in civilized society. To do this, he must inhibit more than nine tenths of his caprices and impulses and force himself into the forms of behavior that have been settled by society. Some of these forms and usages are mere fashions that do not concern objective well-being. Others, however, are habits which concern health or prosperity or peace with one's neighbors and cannot be neglected with impunity.

No wonder that woman becomes conservative when she has, as mother of the family, all the work of training children into the observance of so many forms and usages! Her chief work is inhibiting this or that and educating the child into the practice of inhibiting constantly. He must repress his animal nature and form in its place a spiritual nature.

The vocation of the mother in rearing the child is taken up and continued by the school teacher. The child has already acquired—thanks to his family education—his bundle of personal habits and the use of language to communicate ideas and to receive them.

But the teacher has many new provinces of habit and knowledge into which to lead the pupil. These belong on the one hand to behavior and concern the education of the will, and on the other they concern the intellect and relate to perception, reflection, thought, and insight.

The special work of the school in the great process of education is that of giving to the youth letters and civil manners. The active process of education includes, as is evident, not only the school, but the family nurture and the church, also the state and civil society.

The school in teaching civil manners differs in its functions from the family. Behavior in the family is based on a form of socialism—each one shares in the property of the whole, and there is no hard and fixed line of division drawn within the family, such as separates one family from another. Hence, family education does not suffice to develop the individuality of the pupil beyond its most elementary stage. The school has to develop the secondary stage of individuality, that wherein the youth acquires a deeper independence. The school pupil must learn, how to behave towards independent equals and towards those established in authority over him, not by nature like his father and mother, but by civil ordinances appointed his teachers. Omitting for a moment the other phase of school education, that of intellectual training, let me ask you to consider more in detail this education of the pupil's will in the matter of behavior. This is not theoretical instruction, but essentially practical—the training of the youth in doing. To be sure, the good teacher mixes with his

discipline a gradual training into the reasons for it. He shows why the pupil must be observant of the rules of the school—namely, for the efficiency of the school itself. But the instruction in the theory of good behavior is not so important as the practical training itself. It is more important that the youth shall form habits of punctuality, regularity, silence, and industry, than it is that he shall see the use of these habits.

The school, as I conceive, is in this respect the most signal means that exists for the training in citizenship.

In recent years, we have seen educators give especial attention to this function of education, and a large association has been formed with a view to promote instruction in civics. I do not think that it has been thoroughly considered how exactly the well-disciplined school furnishes just the training that is needed in civics.

Coming from the family, the child is fully nurtured in the clan feeling; he now must be educated out of the clan feeling into civil obedience. The form of school discipline furnishes this kind of education. The youth finds prescribed tasks and is required to form habits of working in concert with others. He must practice rigidly the semi-mechanical virtues of regularity, punctuality, silence, and industry in obedience to the constituted authority of the teacher. We must not fail to notice that those semi-mechanical virtues are just what is required to adapt the man to combine with his fellow-man. He must restrain himself out of respect for the rights of others. He must be persistent, regular, and punctual, or his work will

interfere with that of others. He must be industrious. There is no community where so much respect is taught for equals and superiors as in the school. Civil behavior is not the behavior that is demanded within the family—that is too much one of mutual confidence and interdependence. The form of school order is of a more advanced quality, because it presupposes independent interests combined with a common interest.

The child who behaves well at school, therefore, practises such conduct as enables him to coöperate with others in the community and respect others' rights, while he supports a common authority. The school pupil simply gets used to established order and expects it and obeys it as a habit. He will maintain it by a sort of instinct in after life, whether he has ever learned the theory of it or not. But the good school inculcates gradually the principles of its rationality in the mind of the pupils. They gradually come to see that rules of order are based on deep underlying reasons, and are not the arbitrary will of the teacher, but the necessity of the school itself as a social institution. If youth are to be collected into an institution, the school, in order to be taught, it is necessary that they should observe such rules and regulations as make possible the instruction of the same in classes and by teachers.

Having taken this glance at the purely practical work of the school as training in civics or citizenship, let us consider in fuller detail the work for it in the training of the intellect. We have said that the school has for its specific work the preparation of the pupil for independent citizenship by civic habits and

letters. Letters include the intellectual side of his training. The printed page is an instrumentality of inter-communication. It enables the individual to enter into the fruits of all human life—the observations of men past and present, their thoughts and reflections on things and events of the world, and their actions and successes or failures. The participation in all this is given with the training in letters: reading, writing, arithmetic, geography, history, grammar are the first studies of the school and they form the vestibule or fore-court that leads to that intellectual participation of each man with all men which constitutes civilization.

I have called the school teacher one of the most conservative members of society. It has become evident ere this why he deserves this epithet. He has to pull against the tendency of his pupils to capricious and arbitrary behavior. He must impose on them the form of reason in the place of their wild naturalness. The teacher insists on the adoption of the prescribed forms, and this is the essence of conservatism.

The teacher is conservative not merely in matters of will-training—matters of habit and action—but he is conservative also in the intellectual part of his instruction. He teaches the five cardinal branches as if they contained the wisdom of the race handed down to the rising generation. In fact, there is substantial truth in this assumption. Even in these times of rapid progress, the new acquisitions to the world's reservoir of human learning is not enough to cause any material change in the school compends of one generation to fit them for the children of the next. The aggregate of old knowledge bears so great a dis-

proportion to the new that the work of the teacher goes, nearly all of it, for the guidance of the pupil in mastering what is traditional.

But here is the place for an important distinction. While the family education lays chief stress on the implicit obedience of the child and does not trust much to the child's ability to comprehend reasons, the school on the other hand is bound to kindle as much of self-activity as possible.

In receiving his heritage of the wisdom of the race, the youth should verify it in his own experience and to some extent, by the method of investigation, conduct experiments of his own. The school should, in short, make the pupil's knowledge live knowledge.

Here makes its appearance one of the two great paradoxes in education. While education is conservative and makes it its chief business to initiate the child into what has already been learned and done before his time, it at the same time insists that he shall receive this learning actively and digest this knowledge by his own thinking and observation. It is quite natural that schools will differ in this respect, and, while some will lay most stress on the acquisition, others will lay most stress on the assimilation. The one class of schools will lay more stress on the memory, and the other will lay more stress on original investigation.

There will be in this matter, also, differences of nations one with another, extending from top to bottom through the entire educational structure.

Each nation has traditions of its own, and we in this country, and for the most part I believe that other Anglo-Saxon countries are with us, find ourselves in

a deep contrast to the German school system. We as a people lay more stress on prescription—we require that the pupil shall conform himself to the prescribed rules of behavior and the matter to be learned. We have more faith in the memory and are, as a people, somewhat sceptical in regard to the value of the pupil's original work. We think it is better for him to use most of his time in learning the stores that have been accumulated. Hence it comes, that the reform in education, led forward in Germany by Pestalozzi and Froebel and carried out into practice by the pedagogues of those nations, is a perpetual challenge to the educational methods of English-speaking nations, and perhaps I may include, too, all other European nations. The Romanic and the Anglo-Saxon peoples have always laid more stress on memory work with children than their German contemporaries. They have filled the memory of the child with prescribed conventionalities of intelligence and have required strict obedience to external authority in the matter of behavior.

The German theory of education seems to take for granted, without the slightest question, the docility of the pupil. The German child belongs to a knowledge-loving race. Hence the German theory of education makes prominent the self-activity of the child as the one object of education. It repudiates foreign constraint either in conduct or in intellect. It condemns memorizing as a process of enslaving the intellect to dead items of information or opinion. It condemns the strict discipline of the schools as producing mechanical habits of obedience to the will of others. To awake the pupil's mind intellectually is theoretically the chief

aim; critical alertness, and individual power to test and verify the statements of others, as well as to undertake works of original investigation—these are the supreme objects of German pedagogy.

Students of ethnology are aware, however, that nations differ in respect to their bent of mind and their natural aptitudes. The pedagogy of peoples is wont to be based on some insight into these aptitudes and the consequent necessity of inhibiting excesses. The Germanic nations are knowledge-loving, but the Anglo-Saxon nationalities love adventure and the exercise of the will power far more than they love science. The precocious English or American child exhibits an amount of restlessness and caprice which compels his teacher to direct a large amount of nervous energy from the work of pure instruction to the work that is called discipline, or government of the school. The child with precocious directive powers, and correspondingly small love of knowledge for its own sake, is very difficult to manage in the school room.

This gives us the clue to that tendency in our pedagogy and to that in all English-speaking countries, to allow intellectual instruction to degenerate into exercise of the memory alone. Memorized work may be tested with the least possible trouble—it does not distract the attention of the teacher from the work of keeping order and discipline in his school.

But ever since I began to attend educational meetings, I have heard this memory work condemned and the work of the thinking powers and original observation commended. I do not know how much longer it has been the fashion in teachers' assemblies to attack the one-sidedness of our practice. But, on reading

Locke and Milton, one may conclude that it has always been the staple subject of educational discussion.

One is tempted to ask the question how much our methods have been modified.

The growth of cities has increased the proportion of graded schools, and classification has increased the length of time devoted to the conduct of a lesson. This alone of itself has led to a greater degree of thoroughness. The lesson has been analyzed more critically, the pupil has been called upon to explain in his own words the thought of the text-book, and finally he has undertaken laboratory work and the comparison of authors. The rapid increase of cities, then, has brought about a reform of our methods in the direction of the German ideal. But we still lay more stress on discipline in our schools than we do upon intellectual instruction, and we doubtless shall continue to do so while the character of our people remains action-loving rather than knowledge-loving. Our inhibitory work we see must lie along the lines of caprice and adventure. The German must look out for a defect in a different quarter. He must make his knowledge-loving children as active as possible and stir them up to adventure and original effort, at least in the realm of the intellect. We, Americans, defend our great tendency to prescription by calling it moral education and asserting that it is far more important than intellectual education.

We have already seen how easy it is to defend it, in our discussion of civic instruction as furnished by the well-disciplined school.

The second great paradox in school education is the counter-impulse of the course of study to drift towards preparation for one's industrial vocation on the one hand, or on the other hand towards ideal standards of culture removed from the wants of daily life. It is the conflict between the bread and butter and the culture studies. This second paradox is quite as much a perennial subject of educational discussion as is that first one of prescription *versus* spontaneity, or self-activity *versus* conformity to imposed patterns.

The so called "practical" education claims to give the child what he will most need in life, while the education for culture claims that its intellectual discipline gives such a solid basis of character and such versatile powers of thought that it will in the end prove far more practical than the narrow and concrete curriculum which is supposed to fit the pupil for business.

It does not appear that nations divide on this question into two opposite tendencies. Rather it seems that, in each national system of education, both tendencies are active and in a state of unreconciled tension against each other.

Inasmuch as the school ought to have both these tendencies and have them properly balanced, there is a legitimate effort on the part of each to find a more suitable form in which it may offer its curriculum to the school. New devices are invented from time to time and commended for adoption.

But it often happens that a really good device in education gets recommended at first on wrong grounds. For example, the kindergarten was advocated on the ground that it utilized the children's play for serious ends. But that seemed to wise educators to ignore

the true use of play itself, which is of great service in developing a sense of personality in the child. By perfect freedom in acting out his own caprices in play, the child comes to know himself—play is a sort of self-revelation.

But to turn play into work is to destroy this feature of it. So to turn work into play on the other hand is a serious mistake, for it prevents the development of the secondary and deeper personality which feels satisfaction in subordinating itself for rational purposes. For, in work, the man gives up his own likes and dislikes, his whims so to speak, and conforms to the requirements of some external necessity. He gives up his subjective preferences and adopts what is objectively necessary. This is what we call "rational."

This first ground of the advocates of the kindergarten was therefore a bar in the way of the progress of its adoption as a link or member of the school system.

But when it came to be discovered that the true kindergarten does not turn play into work, nor work into play, but that it furnishes a very ingenious graded course of school exercises which develop in the child an interest in doing serious tasks, while it at the same time preserves and protects in the gentlest manner the delicate individuality of the young pupil, then the kindergarten began to commend itself to all wise educators as a sort of transition from the education of the family to the more severe and exacting education of the school as it is and has been.

So, too, in the case of manual training which has been pleading for a place in common school education. It was at first defended on the preposterous

ground that it is educative in the same sense that arithmetic, geography, grammar, and natural science are educative. This caused the new claimant to be distrusted by all teachers who had investigated what is called the educational value of the several branches of study. For it was known that each branch has its specific function and that no one branch can take the place of another. Arithmetic and other mathematical studies open the window of the soul that looks out on the physical universe and shows the necessary laws of matter and motion. On the other hand, grammar opens a window of the soul that shows the operations of the mind itself. For the mind has revealed itself in language and shown its logical nature in the structure of the sentence and in the functions of the parts of speech.

Geography on the other hand shows the social structure of the world of humanity. It shows the interdependence of one individual on another, and of one community on another. Through division of labor and through distribution of peoples in all parts of the world, the fruits and productions of all climes and conditions are made use of. Commerce is a great world process that collects all these articles of food, clothing, shelter, luxury, amusement, and culture and distributes them again to each section and to each individual, so that all share in the labor of each, and each in that of all. Thus geography opens a window of the soul that reveals to the pupil this great industrial process going on at every moment in all parts of the world, and he learns to see himself as related to this process and thereby gains a rational self-consciousness. For a rational self-consciousness is the

perception of the larger self of the race: the social whole acting to reinforce the individual and assist him in his efforts to conquer nature and gain a supply of food, clothing, and shelter without sacrificing his higher spiritual manhood in mere drudgery.

History shows us the higher selves of man organized into the form of institutions, the family, civil society, the state, the church, each realizing man's higher rational self in such a manner as to reinforce the puny individual. It thus opens a window of the soul which affords a vast survey of human nature. Literature exhibits the process by which feelings arise in the soul and become distinct ideas, and afterwards pass over into convictions, and then become actions.

The insight into the educational value of these general school studies caused the plea for manual training to be slighted at first, because of the evident absurdity of its claim to an educational value of the same kind as studies that open the windows of the soul.

But then it came to be considered later that modern civilization rests on productive industry, and that productive industry uses labor-saving machinery as its chief instrument to emancipate human beings from drudgery; that it takes the hand-worker and turns him into a brain-worker—for the machine does the hand work but it requires a brain to direct it. Hence productive industry needs more and more directive power, and less and less mere sleight of hand. Machinery increases the productive power of labor a hundred fold, and certainly the youth of the rising generation needs some general training in school which enables him to understand both the construction and the management of machines.

Now the manual training school has hit upon just the course of study and practice that will teach the pupil the construction of machines out of wood and iron. Manual training will therefore have its justification as a part of the common school curriculum.

The youth will, thus educated, find himself at home in a civilization which is more and more accumulating inventions of all sorts and descriptions to perform the work necessary to supply our people with food, clothing, and shelter at so cheap a rate as to leave a large surplus of income to purchase means of luxury, amusement, and culture. Gladstone has estimated that, in 1870, eight millions of laborers in Great Britain performed with the aid of machinery as much work as the total laboring population of the globe could perform without the aid of machinery.

The studies and disciplines of the school open the windows of the intellect upon all points of the horizon of existence, and they train the will to labor at what is most difficult because most unusual for the animal nature. The lower organized human being can work with his hands with pleasure, while it is still a task of great difficulty for him to contemplate ideas or undertake any sustained trains of thought. If youth can be taught to bring their powers to bear on such subjects as arithmetic, grammar, history, and literature, they certainly can with ease give their mind to any form of manual training or the work of external observation, because the greater includes the less, and the studies of pure science are far more difficult to carry on than studies in applied science.

The first step above the brute instinct begins, when man looks beyond things as he sees them existing be-

fore him and commences to consider their possibilities; he begins to add to his external seeing an internal seeing; the world begins to assume a new aspect; each object appears to be of larger scope than its present existence, for there is a sphere of possibility environing it, a sphere which the sharpest animal eyes of lynx or eagle cannot see, but which man, endowed with this new faculty of inward sight, perceives at once. To this insight into possibilities, there loom up uses and adaptations, transformations and combinations in a long series stretching into the infinite behind each finite real thing. The bodily eyes see the real objects, but cannot see the infinite trails; for they are invisible except to the inward eyes of the mind.

What we call directive power on the part of man, his combining and organizing power, all rests on this power to see beyond the real things before the senses to the ideal possibilities invisible to the brute. The more clearly man sees these ideals, the more perfectly he can construct for himself another set of conditions than those in which he finds himself.

Men as tool workers, as managers of machines, participate in this higher kind of perception in different degrees, but all have it to some extent. The lowest human laborer has the dimmest notions of these ideals; they are furnished him by others; he is told what to do; he furnishes the hands to work with, and some one else furnishes the brains or most of the brain work. Unless a directing mind is near by to help at every moment with the details of some ideal, the rude laborer ceases his work, having no knowledge of what is required next. His capacity to grasp an ideal

is small ; he can only take it in tiny fragments—small patterns dealt out to him as a hand by the directing brain of the overseer or “boss.”

It seems a waste of power to have two brains to govern one pair of hands. It is evidently desirable to have each laborer developed in his brain, so as to be able to see ideals as well as to realize them by his hands.

There are different degrees of educated capacity, due to the degree in which this power of seeing invisible potentialities or ideals is developed. The lowest humanity needs constant direction and works only under the eye of an overseer ; it can work with advantage only at simple processes ; by repetition it acquires skill at a simple manipulation. The incessant repetition of one muscular act deadens into habit, and less and less brain work goes to its performance. When a process is reduced to simple steps, however, it is easy to invent some sort of machine that can perform it as well or better than the human drudge. Accordingly, division of labor gives occasion to labor-saving machinery. The human drudge cannot compete with the machine and is thrown out of employment and goes to the almshouse or perhaps starves. If he could only be educated and learn to see ideals, he could have a place as a manager of the machine. The machine requires an alert intellect to direct and control it, but a mere “hand” cannot serve its purpose. The higher development of man produced by science, therefore, acts as a goad to spur on the lower orders of humanity to become educated intellectually. Moreover, the education in science enables the laborer to easily acquire an insight into the construction and

management of machines. This makes it possible for him to change his vocation readily. There is a greater and greater resemblance of each process of human labor to every other, now that an age of machinery has arrived. The differences of manipulation are grown less, because the machine is assuming the hand work and leaving only the brain work for the laborer. Hence there opens before labor a great prospect of freedom in the future. Each person can choose a new vocation and succeed in it without long and tedious apprenticeship, provided that he is educated in general science.

If he understands only the theory of one machine, he may direct or manage any form of it. He could not so easily learn an entirely different machine, unless he had learned the entire theory of machinery. The wider his knowledge and the more general its character, the larger the sphere of his freedom and power. If he knows the scientific theory of nature's forces, he comprehends readily not only the machine, but also all of nature's phenomena as manifestations of those forces. Knowledge is educative in proportion to its enlightening power or its general applicability. The knowledge of an art is educative, because it gives one command in a sphere of activity; it explains effects and enables the artizan to be both brain and hand to some extent. A science lifts him to a much higher plane educatively, because he can see a wide margin of possibilities or ideals outside of the processes in use and outside of the tools and machines employed.

There remains a permanently valid place for the manual training school, side by side with apprentice

schools for all youths who are old enough to enter a trade and who are unwilling to carry on any further their pure culture studies. Cultivate the humanities first and afterwards the industrial faculties. In our civilization, there ascend, out of the abyss of the future, problems of anarchy on the one hand and of socialism on the other; individualism carried to such extremes that all subordination to peaceable and established law is deemed a fetter to freedom. This centrifugal tendency to anarchy is paralleled by a centripetal tendency that wishes, not only to have the central government perform all the duties of establishing justice and securing the public peace, but also to have it own all the property and manage all the industries. In short, the "nationalists" propose abolishing the sphere of competition and individual enterprise. Education in the history of the world, and in the literature that reveals the aspirations of the human heart, is well calculated to prepare the youth for a rational verdict on the extreme issues that will continually arise among a free people. Above all, we must never yield to the economic spirit that proposes to curtail the humanizing studies in our schools, for the sake of adding special training for industries. Rather must we do what we can to extend the period of study in pure science and the humanities, knowing as we do that all, which goes to develop the ability of the youth to see possibilities and ideals, goes to make him a more productive laborer in the fields of industry.

II.

THE FOUNDATION AS LAID IN THE KINDERGARTEN AND THE PRIMARY SCHOOL.

BY MISS LUCY WHEELOCK, CHAUNCV-HALL SCHOOL, BOSTON.

"The height of the pinnacle," says Emerson, "is determined by the breadth of the base." It would be a poor architect or builder who did not estimate the proportions and height of the entire building in planning the foundation and poor economy which furnished inferior material and workmanship in laying the base. No beauty of carving, no graceful tower can save the structure whose foundation is not sure. The leaning tower of Pisa stands as a monument to the fact that the upright and true can never stand upon the insecure. Even a child, in building his light-house or tower of blocks, soon learns that the whole will fall, unless the base is true and firm. We read of two famous builders, one of whom built upon a rock—"And the rains descended, and the floods came, and the winds blew and beat upon that house, and it fell not, for it was founded upon the rock." But the foolish man built upon the sand. "And the rains descended, and the floods came, and the winds blew and smote upon that house, and it fell, and great was the fall thereof." The houses may have been the same, both were put to the same test; but the result was governed by the foundation. Froebel has translated this parable for the educational world and applied

it in laying the foundation for all human activities in the kindergarten; and the Baroness Marenholtz-Bülow, his best interpreter, has expressed the truth thus: "Whether a child becomes a moral freedman or a slave to his own and other's caprices depends largely on the foundation laid in earliest childhood." If the teacher in the kindergarten and primary school can only have a vision of the temple that is to be, of the structure to be raised on her foundation, what patience and zeal and knowledge must she bring to her work, that the base may be sufficient for that which is to rest upon it forever.

What is the true height of the pinnacle, the aim to be kept in view?

In an article in the *North American*, Dr. Stanley Hall writes: "There is one thing in nature, and one thing alone, fit to inspire all true men and women with more awe and reverence than Kant's starry heavens, and that is the soul and body of a healthy child. Heredity has freighted it with the results of parental well and ill-doing and filled it with reverberations from the past more vast than science can explore; and on its right development depends the entire future of civilization two or three decades hence. Simple as childhood seems, there is nothing harder to know, and, responsive as it is to every influence, nothing harder to guide. To develop childhood to virtue, power, and due freedom is the supreme end of education to which every thing else must be subordinated as a means."

Old Trebonius, the school-master of Martin Luther, spoke well, when he said, in response to the question why he lifted his cap when a school-boy entered the

room: "I salute the rising generation. In these boys sitting in their jackets upon the bench, I see the men who are to mould the world."

"It is the far sight, the quiet and confident patience, that above all separate man from man and near him to his Creator; and there is no action or art that we may not measure by this test. Therefore, when we build, let us think that we build forever."

We hear and read constantly of the greatness of this country of ours, of the extent of our railroads, the size of our public buildings, and all our magnificent institutions. On the other hand, we are constantly reminded of the evils attendant upon all this material prosperity, of the perils threatening us, of the many unsolved problems, of the issues yet to be confronted. The answer to all these questions as to the future is to be found in the kindergarten and primary school. The success of our system of government depends on the development of "virtue, power, and due freedom" in its citizens. The ideal kindergarten is the ideal republic; its little citizens are trained to self-activity, self-control, and the "due freedom" which comes from a regard for the rights and happiness of others.

"You are making a monarchy of what should be a republic," was the reproof once administered to Dr. Johnson, when he had been monopolizing the conversation at dinner. The teacher, who maintains her authority by rule and punishments and rewards, is substituting a monarchy for the free atmosphere of the republic and is laying no foundation for future citizenship. There is no development of will-power. The constant substitution of another will to direct his acts, the servile obedience to *must*, makes the boy

weak, deceitful often, and incapable of self-control. When the rains come, and the winds blow and beat upon the house, it falls, because it is founded upon the sand. Or, if the teacher allows freedom to run riot, on the other hand, and fails in a wise guidance, she lays the foundation for anarchy and disregard of law and order.

"The man who is firm in will moulds the world to himself," says Goethe. The strengthening of will comes by its exercise in the early years of childhood, for on this rock of character is the house founded which endures when the storms of life come. The only rule necessary in a school-room is the Golden Rule. Where this rule is constantly applied, it becomes iron in its hold upon the children. Every act, every character introduced in story or reality, is immediately measured by this golden standard. In one class where the story of St. Martin had been told, he was denominated "a gold man," because he gave half his cloak to the beggar; and a small boy thought that the king, who would not allow the Pilgrims "freedom to worship God," could not have been familiar with the Golden Rule.

"He *says* he has it for his rule; but he keeps all the houses in the village for himself," was the practical application made by one child, who had detected the difference between profession and practice in the conduct of another.

"His tongue was framed to music,
And his hand was armed with skill,
His face was the mould of beauty,
And his heart the throne of will,"

is Emerson's definition of the man of power.

How is *power* to be developed in the primary school? Let us look at this side of the base. "Inasmuch as the child is self-active and grows only through the exercise of his self-activity, education consists entirely in leading the child to do what develops his power of doing." I quote from Dr. Harris.

The old adage "Knowledge is power" has been relegated to the age of scholasticism. Not knowledge alone, but the *ability to do*, the ability to use knowledge, if you will, is power. The mere scholar is often a lumberer of the earth. Romola and her father delving in the library among old manuscripts were no factors in the life of Florence. "A stock of mere bookish knowledge is a sad stock indeed," wrote Montaigne long years ago. It needs much more skill to lead a child to find out for himself than to tell him. The old fashion of letting a child learn that the area of a parallelogram is equal to the product of the length by the breadth was an easy one for the teacher and gave the desired *knowledge*, but the gaining of the truth by actual demonstration through the hand and eye by the use of a square of paper gives *power*, and then the process is very simply applied in the discovery of the method of finding the area of a triangle. The teacher, who recognizes the supreme end of education, will subordinate reading as a means thereto and not give it the chief place in her day's programme. "Reading is a means of establishing relations with the world, like seeing and hearing, and there is no more virtue in reading than in seeing," Charles Dudley Warner has said in an article on "Reading." The end is the inspiration and awakening to be gained through the study of literature, and this may begin

long before the child is able to read for himself. Biographical and historical tales may be used, and the children are eager to make their own illustrations of the stories. And these furnish a very important means for awakening generous impulses and high ideals.

"The plain and sufficing face of nature" is revealed through such writings as Mrs. Gatty's "*Parables from Nature*" and simple science stories, and the meaning and spirit of God's great story-book begins to be seen.

The basis for the later study of history is found in the primary school in the use of the sand-box in representing scenes in connection with the story of our country. The events at Concord and Lexington, on Bunker Hill, and under the Washington Elm become very real when pictured in this way; and, in one instance, a special purpose was given to the paper folding in the making of houses, tents, and boats, to aid in the representation of the evacuation of Boston by the British. Such lessons as these and the observance of the national holidays, as Washington's Birthday and the Seventeenth of June, arouse a love of country and patriotic feeling; and a favorite song, one often called for, is "My country, 't is of thee."

The stories of the children of the race are full of interest to the children of to-day, and mythological and classic literature may be used, with due regard to selection of that which is appropriate to child-life. Wonder has been called the seed of knowledge, and little eyes may be opened to observe the different phenomena connected with the return of life in the spring, by the old tale of Proserpine, who was

retained in the underground realm of King Pluto for half the year and whose loving mother Ceres decked the earth with grass and grains and flowers to celebrate her return to earth.

I knew a group of children, who were eager to build the palace of Circe, the raft of Ulysses, and other things to illustrate the tales from the Odyssey told them at the lunch-hour every day.

But the simple child-poem, the hymns and songs of the kindergarten, are best adapted to awaken that virtue or desire for goodness, which is the chief thing to be desired in the foundation for life. The rhyme of the poet has given us some of the highest truths of life in a form which appeals most forcibly to children.

No better impression of the truth that each thing in its place is best, and each one has his work to do, can be made than by the use of Emerson's "Mountain and Squirrel."

"Talents differ; all is well and wisely put;
If I cannot carry forests on my back,
Neither can you crack a nut."

Any child can appreciate that, or the courage and mission of the Daffodil, as presented in one of our spring songs:

"I must be in my place, although it is chilly,
For the children expect me," says Daffy-down-dilly.

If virtue is kindled at the touch of joy, then surely the kindergarten and modern primary school must have the secret of virtue, for the child is led joyously to self-government, to self-activity, and to right relations with others.

To do and *to be* is the watchword; and *to be* is to

be right, for the teacher who sees the true height of the pinnacle knows that it reaches to the great, white throne and that the stones she is laying to-day are to be the precious stones in the New Jerusalem.

And so with this far sight and a quiet and confident patience, "let us think when we build, that we build forever."

DISCUSSION.

MISS JEANNIE L. JILLSON, of Newburgh, N. Y., spoke as follows, in the discussion of Miss Wheelock's subject:

In the address just given, we heard reference made to the beginning of the study of literature, by the child, by the aid of poetry; and it is that subject that I wish to speak upon: "Poems for Children." Sceptical persons will be very likely to say that it is impossible to begin literature before the high school, that no boy or girl can appreciate the writings of others before then; yet, should we really leave the study until the years stated, I think we should find a great deal of time had been lost. The really intelligent students, those who get the most good from the study, are those who have spent the greater part of their lives from the earliest years, in acquaintance with the great writers. For we all acknowledge that the best understanding of literature is not that gained by learning the facts about an author's life, the dates of his birth and death, and the names of the books or poems he has written; but it is the study of the thoughts and feelings of the writer, the study of the characters which figure in his works, and an ability to recognize a work of Shakespeare's, not on account of its name, but by its working out of

a great idea,—or a work of George Eliot's on account of its working out or development of the character of an individual,—or a work of Dickens's through the intimate relationship, into which we are brought, with the lower phases of life. It is this aspect of the study of literature to which I refer, which I say must begin with the child in the kindergarten and the primary school.

Those of us, who have taught literature, realize at once this fact, that the brightest, readiest students are those who have read the most and have learned the most. This leads to our first point: the necessity of the committing of poetry and prose by the child in the kindergarten school. What is the best method of teaching the child to learn poems? The great mistake so often made, which once made is so hard to rectify, is allowing the child to learn the words of a poem and not the thought. Multitudes of children can recite poems word for word and yet are not able to give one thought from them, in their own words,—like the child who, when old enough to enter Sunday School, was given the catechism to learn, and, the first question being "What is your name?" began to study in this way: "What's your name? John Smith, John Smith. What's your name? John Smith, John Smith." So, thinking all study must be done in one way, and that one way the old way of word study, very often the child believes he has learned a poem, when he has simply committed the words of it. Our second point then is, that the child shall learn the thought of the poem; for this is to start him in his life study of literature, and we must have the start a right one. This leads to the point of the style of the poem, an impor-

tant point and one which has a special relation to us, as teachers. Too often, in large classes, the selection is left to the pupil, and, as a result, we have a low standard; the child learns whatever he can find that has a story to it, without the thought of the manner in which it is expressed. To be sure, we must have a story to interest him, an action to attract him, for the first law of life everywhere is action. The child himself is action through and through, and what naturally appeals the most to him is action, also, and that of a high order.

The first poems to be selected are those which have close connection with the things the child is most acquainted with, the flowers, the birds, the children themselves. Take such a poem as this:

ROSEBUD'S FIRST BALL.

'T is really time you were out, I think,
Said Lady Rose, to her daughter small,
So I'll send my invitations round,
And give you, my dear, a splendid ball.

We'd best decide on your toilet first;
Your sister Jacqueminot wore dark red,
But you are so much smaller than she,
I think you must wear pale pink instead.

Then whom to invite; we can't ask all,
And yet its hardest of all to tell
The flowers from weeds. Indeed, last year,
I snubbed Field Daisy, and now she's a belle.

We'll ask the Pansies; they're always in
The best society everywhere.
The Lilies, Heliotropes, and Pinks,
Geraniums, Fuchsias must sure be there.

Miss Mignonette is so very plain,—
A favorite though,—I'll put her down.
The Violets, I think, are away ;
They're always the first to leave for town.

The Larkspurs are such old-fashioned things,
It is not worth while asking them to come ;
The Zinnias are coarse, Bergamots stiff,
The Marigolds better off at home.

Miss Morning Glory I'd like to ask,
But then she never goes out at night ;
She's such a delicate thing, she says,
She scarce can bear a very strong light.

The Verbenas, I know, will be put out,
If we do n't ask them ; the Petunias, too ;
They're not quite *au fait*, but then, my dear,
They're such near neighbors, what's one to do ?

I'll make out my list at once, for there
A butterfly is coming this way ;
I'll send my invitations by him,
He'll go the rounds without delay.

Dear ! dear ! to think that to-morrow night,
You'll really be out ! Now listen, my child,
Don't go much with your cousin Sweet Briar ;
He's very nice, but inclined to be wild.

This poem attracts the child by its story, yet teaches of the kinds of flowers and their seasons of blooming. Let us bear in mind one thing in selecting these poems : each one should in some way teach facts, that the child may be the better for having learned. And not only facts but ideas may be taught, as shown in the following poem :

MISS WHEELOCK'S ADDRESS.

THE DANDELION.

"Pretty little Dandelion,
Standing in the sun,
Have you any curls to sell?"
"Not a single one."

"Have you any eggs or cheese,
To go a marketing?"
"I have neither one of these,
For peasant or for king."

"Little idle Dandelion,
Then I'll mow you down.
What is it you're good for,
With your golden crown?"

"Oh! I gild the fields afar,
In the pleasant spring,
Shining like a morning star,
With the light I bring."

In this poem we find expression given to that beautiful thought of Emerson's, "Beauty is its own excuse for being."

We must remember that we are not working for the present alone, but for all the life-time. The child's studies, during the period from four to ten years of age, are to lead to those of the next ten years, and his duty then is to form the foundation for his life work. It is the beginnings, which we must watch and direct aright, not only in this one important study of literature, but in all the branches of education.

HON. GEORGE A. WALTON, Agent of the Massachusetts Board of Education, West Newton, Mass., continued the discussion of Miss Wheelock's subject, as follows :

The interesting discussion of kindergarten methods, as contributing to the general cause of popular education, affords an opportunity to emphasize a phase of these methods which I deem of the greatest importance. This is their disciplinary character. The kindergarten entirely ignores the "practical education" theorists. It assumes that nothing in education is practical, except a mind trained to rightly use its powers and a body adapted to meet the demands of a well-trained and active mind.

What the kindergarten proposes should be the aim of all grades of elementary schools. At present, all our courses of study have their bases in knowledge; our methods contemplate little else than storing the memory with facts; they too often make it a chamber of empty words. Instead, our courses of study should be arranged with sole reference to mental development.

In assuming this position, I profess myself a radical. The proposition I have stated is revolutionary. It implies an agreement among educators and teachers that knowledge as such is of little consequence, that there are mental powers that can be trained, that these are the same in all persons, that they have a natural order of development, that there is a method adapted to give the proper training to secure that development,—in fine, that there is a science of pedagogy, in which all persons engaged in teaching are supposed to be versed and with which they ought to be familiar.

Such a body of doctrine is the first principle of the kindergarten, and the development theory has already a large place in the educational work of the times.

What do the military cap, brass buttons, epaulets, sword, gun, introduced in recent years into our high schools, mean but discipline? Certainly not the blood-shed and strife which they naturally suggest. Otherwise than as an aid in school discipline and human development, military drill could have no place in the schools.

As I have used the illustration, it serves my purpose. But, in justice to my own convictions, I should remark that not even these claims, were they well founded, would sanction the introduction of military drill into a system of elementary schools, or into any grade of public schools. But this aside.

The manual training now introducing into town and city bases its claim for a place in the school curriculum upon its developing power. It makes no pretension to providing the community with skilled artists or artisans. It is said that, through the hand in doing, the mind gets a discipline that it can get in no other way. Drawing and molding, which are a part of the scheme for manual training, are practiced for the development they occasion to the intellectual powers and to the sensibilities and will. The same is true of music; though a great good in developing powers that can find expression in no other way, it is yet to many persons an ornamental branch of study; they can see no dollars in it.

Gymnastics are, of course, wholly intended to give to body and mind increase of power. And now comes the kindergarten, which has won its way to favor by the results it has shown in child culture. Let the principle upon which it is based prevail in all our schools and they will be saved much of the criti-

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cism they receive. Merely traditional studies, as well as methods, would disappear and in their place would be introduced some things as different as light from darkness, things now wholly wanting in our course,—for example, nature studies, which afford almost the only means for developing the observing powers.

The plan, under such a theory, would be to consider the child an end in himself; to find at any given period what powers are naturally in the ascendant; and to adapt the course of studies and method of teaching to their development. Having passed through these studies by a rational method under trained and competent instructors, the child, it would be assumed, has acquired all that *he* can get from the course. Whether this be little or much, this period has passed, and the next presents its claims, which in their turn must be heeded.

What mischief is introduced into our school work by the notion, that education consists in certain increments of knowledge! They have often little to do with it. All special tests for promotion would be dismissed, as out of place, after such a training. What an impertinence would be a test for promotion applied to children, after thus having completed a course of instruction under the accomplished women, kindergartners, who have so charmed this audience with their discourse this morning! I rejoice in the good time coming, when the spirit and method of the kindergarten and the principles underlying these shall prevail in all the work of our schools, from that for infants up to that for youth and manhood.

III.

A LIBERAL EDUCATION—THE CONTRIBUTION SUPPLIED BY THE GRAMMAR SCHOOL.

BY MR. C. W. HILL, MASTER OF THE BOWDITCH SCHOOL,
BOSTON.

This topic suggests the preliminary query: What is to be understood by the terms "liberal education" and "grammar school," as here used?

I assume, in this discussion, that by a liberal education is meant, what has usually been understood by the term, a completed college or university course. We all agree that the time is at hand when the term is to have a wider signification and will include the results of all lines of vigorous thought and study, wherever pursued, which tend mentally to discipline and equip for service in this great workshop of our American life.

As subjects for study, the languages and literature of the dead past are to have lessening value as compared with the great facts which Nature is unfolding to our view and the great problems of our own social and political life, demanding as these problems do the keenest thought of our best minds. Our universities themselves are leading out to wider views of what may, with propriety, be included in a liberal course of study.

The term "grammar school" is assumed to mean what is understood by it in our larger towns and cities: that school, growing out of the old district school, which takes the pupils prepared for it in the primary schools, at from eight to ten years of age, and holds them in its membership for five or six years.

Its course of study and the character of its work necessarily vary, as the community in which it is located is advanced or otherwise in its position on educational matters.

Partly, no doubt, because this grade of schools touches the life of the community at so many points, it has in recent times come under criticism from all sorts of critics.

The carpenter wonders why a boy in a grammar school should not find the contents of a plank as readily as he, himself, can.

The banker is amazed that the boy he has taken into his office, fresh from some grammar school, cannot add so quickly and accurately as his clerk who has not been to school for years and who, it might be said, has done nothing in the meantime but add.

The merchant does not find his young book-keeper, fresh from the schools, quite up in all the best methods of counting-house computations and hastens to express the wish that our grammar schools could be made to be of some practical use.

The young correspondence clerk sometimes trips in his English, and his employer wonders why a boy, in any grade of schools where grammar is taught, cannot at least learn to express himself correctly.

Some excellent physicians feel sure that our gram-

mar schools are responsible for much of the sickness in the community and fearlessly discharge their duty by advising anxious mothers to remove delicate, candy-eating, party-going daughters, at once, from the unhealthy atmosphere of the school.

The humanitarian finds large numbers of young men and women who have been for a short time, perhaps, connected with some grammar school, yielding to the evil influences which have surrounded them from birth and, forgetting all that has dragged downward in spite of the schools' uplifting power, exclaims, "Behold in these ruined lives the work of your schools."

The ecclesiastic, failing to find his own peculiar theology taught in the schools, hastens to denounce them as heartless and godless.

Now these people do not intend to be unfair critics. Their trouble is that they do not know what this grade of schools is really doing and judge from a too limited observation.

If, after fair practice, the boy who has had a good grammar school training cannot measure boards for the carpenter, add for the banker, compute for the merchant, and write his correspondence correctly; and if, after fair investigation, it shall be found to be the school which causes the ill health of our young people and leads them into vice and crime, or if it does not positively lead away therefrom; and if it can be shown that the influence of school life in this grade is irreligious, or if it fails to inculcate the great principles of morality and religion; then, the carpenter, the banker, the doctor, the philanthropist, and the theologian have a right to criticise.

What, then, is the work done in the grammar school?

In what follows, I shall have in mind what is attempted in some fairly representative school in one of our cities or larger towns. In the admirable paper which has preceded this, the curtain has been lifted by skilful hands and we have been permitted to look in upon the happy, healthy activities of kindergarten and primary school life. In no department of school work has the throbbing of the new life been so keenly felt and grandly responded to as in these grades.

Coming to the grammar school with the responsiveness, enthusiasm, and acquirements which have been so well set before us, what does the child get in the next six years?

For two years more, the work of the primary school is carried on, the same in kind, advancing as the child has power to advance.

One new subject, geography, usually awaits him on entering the grammar school. This is not now made a burdensome study, but the child's interest and thought are awakened by reading and observation.

In connection with his geography, the little student continues to observe the life of plants and animals and sees more of the operations of nature than he was able to observe with his primary school eyes.

His stories written from pictures seen, journeys taken, home life, and school surroundings show a developing power of thought and expression. His knowledge of words grows under the wise direction of his teacher, and he feels the joy of making new acquaintances among them. In his use of numbers,

he begins to see something more of the reasons for his operations and to enjoy them accordingly. He begins to have power to express his knowledge of form by means of drawing and, if wisely taught, to find great delight in the attempt. And so the first period of grammar school life glides happily into the second. Happily, I say, for so it will be if the child falls into the hands of such a teacher as the Lord meant should have the training of little children, who, having had a pleasant childhood herself, is capable of taking children by the hand and leading forth to fresh conquests, just when the primary school has revealed to the child his own powers, and the world of knowledge is discovered lying, invitingly, all about him.

In entering upon the second two years, if the course of study is properly arranged and the child is in the hands of a wise teacher in a good school, he will, in some respects, take a new departure. New subjects demand his attention and new difficulties lie in his pathway, in meeting which he will be thrown more upon his own resources, and his power to reason and think will be developed accordingly. The teacher is not indifferent to these difficulties, but wisely does not desire to remove them from the pathway of her pupil or to blind him to their existence. Fractions now test the teacher's skill and the child's patience; but, as now taught, this subject is fast losing its terror, and children are led to see that in mastering the fundamental rules of arithmetic there is but little left that is new to be learned about fractions. Yet, day after day of patient practice is needed before facility in their use is acquired; but the days, as they pass, are developing power and skill and enjoyment, too.

The language work approaches technical grammar, but the steps are now so well graded and follow each other so naturally that the pupil, coming to explore the intricacies of our conglomerate language, does not have to cross the Sahara of meaningless words and forms so familiar to our own school days.

The underlying facts of geography begin to interest. The pupil is taught the relation of mountains and rivers, of climate and life, of natural resources and the occupations of men, and the conditions of human life.

He learns that it is not by accident that here is a city whose commerce whitens every sea, and there one whose manufactured products reach every civilized land.

The great rivers of the oceans are subjects of delightful study, and he learns that the ever variable winds are subject to laws which can be understood somewhat, even by himself.

The pupil's reading broadens, and history begins to unfold to him her treasures. If wisely taught, he will, in his own way and with the limitations of childhood, people the world of the past with the men and women who made history and will catch some glimpses, not only of what has been, but of some of the reasons therefor.

And so, almost before the child or the teacher is aware, the pupil is ready for the last stage in the grammar school course.

This is more than a mere continuation of what has gone before. The pupil has learned to reason and think to some purpose. His arithmetic takes on more practical forms, he learns business methods, gets some glimpses of what the higher mathematics have in store

for him, and makes discoveries of better ways of doing what, in earlier stages, was hard and laborious. He reasons more clearly still about geographical facts and gets some foretaste of the revelations with which astronomy is to delight him as he goes on. History broadens out. He looks beyond the borders of his own country and learns that American history is but the continuation of the history of England under the Tudors and Stuarts. Civil government interests him. Physics, studied by experiment, awakens still more his power of observation and challenges his power of expression and thus quickens his mental life.

And so the six years of the grammar school course come to a close.

What has been accomplished?

The following summary does not overstate the results:

Such a knowledge of the principles of arithmetic and ability to apply them as lays the foundation for skill in business operations and for the study of the higher mathematics.

A fair knowledge of the nations of men, the countries they inhabit, and the resources at their command, with some ability to reason upon geographical facts.

A knowledge of correct grammatical forms and a tendency, at least, toward their use.

Some acquaintance with our best authors, a growing taste for good reading, and a fair degree of skill and correctness in the expression of thought.

A considerable knowledge of the history of our own country, a glance at contemporaneous history on the other side of the water, with some ideas of historical cause and effect.

Ability to read and render common music at sight.

An eye and a hand able to detect and correct glaring inaccuracies in drawing.

Power to make observations and deductions in regard to the more obvious facts of nature and experience.

By provision of special law in most of the states, the effects of the use of stimulants and narcotics have been considered in connection with the study of physiology.

Were I more than to allude to the great revival of interest in physical education in this grade and the new zeal and work being put into it, I should trench upon subjects assigned to the eloquent speakers who are to address you to-morrow.

Owing to peculiar conditions, to which allusion will be made later, in the great work of character building and the education of the moral nature, there is laid upon the American grammar school a burden and a privilege such as is laid upon no other grade and upon this grade in no other land.

All unknown to the busy world, often unrecognized by the parent and, perhaps, unrealized by the pupil, faithful teachers are doing this work, so wisely and so well that, with comparatively few exceptions, the pupils who *complete* the grammar course go out into the world to lead upright, useful, worthy lives.

In the face of a recent very positive statement that it is impossible to ascertain what is done in an average grammar school, I assume that, in this imperfect sketch, a fair statement has been made of the work done in such a school.

It certainly can be no more difficult to determine

what is represented by a diploma from our well-organized grammar schools, than it is to ascertain what a diploma from Harvard University, with its different courses of study, now represents. It is said that the courses leading to graduation from the grammar school in different cities are not alike. They are certainly as nearly alike, if that is so desirable, as are those of different colleges conferring the same degrees.

With the work done in the grammar school fresh in mind, the question, "What is its contribution to a liberal education," is easily answered. It includes six years of intelligent, faithful work, resulting in the necessary, fundamental acquirements which have been noted; in the development of a love for study which will carry those who ought to do so on into advanced work; and in a degree of mental and moral discipline for which the grade has not always had due credit.

At the recent graduating exercises of a high school, the statement was made by one of the essayists, that "in the grammar school we memorized, but in the high school we have learned to think." Now whatever may have been the unfortunate experience of this graduate, she is very far from fairly representing the work of the grammar schools in this matter.

I boldly assert that, taking the age of the pupils into account, there is no better training in correct habits of thought, anywhere along the line, than may now be found in the higher classes of our best grammar schools.

These contributions to a liberal education furnished by the grammar school, creditable as I claim they are, might be made of still greater value, could some of the

burdens, disproportionately laid upon this grade, be lightened.

The ever-lengthening courses of study, with the school year gradually shortening at both ends, with an increasing number of holidays thrown in between, is taxing to the utmost the skill and power of our best teachers in the grammar schools.

In these conditions, if this grade of schools is to do its work even fairly well, there has come to be an imperative necessity that the number of pupils to a teacher should be considerably reduced.

Whatever may have been the case with former methods of instruction in the grammar schools, with our present methods there is no reason why there should be any considerable difference between the grammar schools and the high schools in regard to this matter. There certainly is no reason why, as in Boston, the number of pupils to a teacher in the grammar schools should be to the number in the high schools as fifty-six to thirty-five.

Neither is there any reason why, with the present requirements of preparation and skill, there should be any considerable difference in the pay of the two grades. If the grammar school is to do its best work and make its best contribution to a liberal education, the work and pay of its teachers must be arranged upon a scale so liberal as to enable it to retain its best teachers in its own ranks and no longer be obliged to make them its contribution, in part, to the grades above.

Having thus shown, though very imperfectly, something of the work done and some of the hinderances which prevent its being better done, the case of the

grammar school might be rested here, were it not that, in a recent address before a body of high school teachers, a charge was brought against this grade of schools by a distinguished gentleman occupying one of our highest educational positions, which demands a moment's consideration. Having in his address argued that, through our grammar schools, "the children of the poor should obtain equal access with the children of the rich to the higher education,"—to which we all say "Amen,"—and having defined the age at which the study of a foreign tongue should begin, his charge which I quote follows:

"Now, our grammar school method in this country positively prevents a child from beginning the study of a foreign tongue at the right age. I say that, as long as it does that, it is an obstruction to the rise through democratic society of the children that ought to rise."

It is true that, so far, no provision has been made for the study of Latin and Greek in our grammar schools, though some provision has been made in a few cases for the study of German.

In Massachusetts, some objection, even, has been made to certain private schools, supposed to be of the same grade as our grammar schools, because so much of the instruction given is in a foreign tongue.

In regard to this matter, two observations should be made:

I. The work now done in the grammar school, whether done there or elsewhere, is a necessary part of a liberal education; that is, no one could claim to be liberally educated who did not possess the acquirements of its course; and we claim that, if obtained in

a grammar school, the work is better done than if obtained elsewhere.

But the grammar school is doing all it can do. Any further addition to its work must involve a corresponding subtraction ; but what shall be taken out, even for those who are to make professional life their aim ?

So far as the acquiring of a foreign language itself is concerned, no one questions that there are great advantages in beginning its study at an early age ; yet may there not be some compensations for this loss of advantage ?

If the pupil has been taken properly through the grammar course, does it not often happen that the mental power acquired in its mastery causes him to overtake some who may have been studying French or Latin for years ? The work of our grammar schools in teaching English was never so good as now, and, understanding what good English is, the ability to use it is of some service in acquiring French or German.

Who make up the upper third of the classes graduating from our colleges and universities ? In the absence of statistics which have not been found available, I venture the assertion that the poor boys and girls who have come up through our grammar schools, with all their limitations and imperfections, make up a very considerable portion of it.

A young man personally known to the speaker, whose only chance, until considerably older than fourteen, was in a very poor grammar school, did much toward paying his way through Harvard, tutoring rich men's sons whose education from the first was shaped for a college course, and he himself graduated very

near the head of his class, attaining his rank on excellence in language.

This is not an isolated case. Is it not more nearly a typical one?

Large numbers of men and women who graduate from college to do excellent work in the teaching of language did not very early look toward a college course as, for themselves, possible.

Doubtless they would have been better students and teachers of language, had they had better early advantages; but the fact that they so often outstrip those who did begin such study earlier proves that other elements enter into the question than merely the best time for beginning the study of a foreign tongue.

II. The grammar school is not a professional school. Its work is not to be judged merely or chiefly by its capacity to fit for professional life.

Were it true, as it is not, that it stands in the way and is a hinderance in getting a liberal education, it would by no means be settled that it ought essentially to change its courses or its methods.

The time has gone by when the educational system might be considered a great pyramid, the chief use of the lower strata being to fit for and support its university apex.

Essential as is the work of the grammar school in acquiring a liberal education, it has a far greater work than fitting its bright boys and girls for college. It is to fit the great masses gathered into its embrace for American citizenship.

In this most delicate and important work Germany, that shrine of our modern educational pilgrims, can offer little help.

The German schoolmaster gathers his pupils about him substantially of one race and lineage, with the same bent and cast of mind, with traditions and susceptibilities in common; and out of these little Germans, of course, he develops the best there is in the German type. What else should he do?

But the American school has a far more difficult work. It is to develop a *new race*—the coming race.

Its work is to take the multitudes as it finds them, of diverse nationalities and antagonistic religious faiths, sometimes from homes of ignorance and vice where all law and restraint are hated and where exist all forms of old world prejudice. These children are to be taken with those from our happier homes and, in our primary and grammar schools, where the burden and privilege of this great work very considerably rest, are to be so moulded and fused into a oneness born of mutual respect, that they shall be able to live together as American citizens and together, as one grand and noble race, transmit to the generations yet to come our Christian civilization with all its blessings, and so save from subversion and extinction that intellectual and spiritual wealth which has come down to us, as the heirs of all the past.

Beside this great work which is weighing down our grammar teachers as they realize how much is involved in it, upon the right doing of which in a very considerable degree rests the stability of our institutions and the prosperity of our country, how small seems the question of the ideal time to begin the study of Latin.

With the grave responsibilities of this moulding and shaping work upon us, we have a right to claim a

cordial recognition of the difficulties and perplexities in our way and a fair appreciation of the results of our efforts on the part of those in the high places above us.

Our work is far enough from being perfect; we welcome all friendly criticism and are spurred on to nobler effort thereby.

Venturing to speak a word in the name of my brethren who, like myself, have reached and are descending the pleasant afternoon slope of professional life, we charge you who are younger and who are to have the great privilege of being at your best and doing your best work in the grand future which is opening up before you, in spite of unsympathetic criticism from those in high places and unappreciative indifference of those lower down, in spite of all false charges concerning the nature and value of your work, whether emanating from over the sea or nearer home, resisting all attempts to divide your forces along sectarian lines, having such an appreciation of the grandeur of your work, humble though it may seem to the onlooker, that no tempting offers will allure you away from it, comprehending that you have in your keeping more than we are wont to realize the success or failure of our democratic institutions,—we charge you to keep these grammar schools true to their mission as the schools of the people, putting into them your noblest work, your noblest selves, fitting in them to the best of your ability for the higher grades and for professional life, but profoundly realizing that you will succeed or fail, as you prepare or fail to prepare the children of the masses of the people, the rich and the poor, the native and the foreign-born alike, for the

great duties, privileges, and responsibilities of God-fearing, law-abiding American citizenship.

DISCUSSION.

MR. LEWIS H. MEADER, Principal of Academy Avenue Grammar School, Providence, R. I., followed in discussion of Mr. Hill's address. He said:

The college and university do much for a few; it is the province of the grammar school to do a little for a large number.

The college does much for men in the so-called liberal professions; for the men who preach to us, for the men who attend us in sickness and restore us to health, and for those who make and break our last wills and testaments.

The grammar school assists in fitting the masses of the community for citizenship and furnishes the literary training for those who in the mill, shop, and market place engage actively in the busy duties of every-day life. Men thus engaged constitute the principal constituency of the grammar school. The grammar school may be reasonably expected to send forth pupils fairly proficient in arithmetic, with some definite acquaintance with our history and the geography of the world, and able to express their thoughts about the common affairs of life in fairly good English.

Our average citizen thus equipped reads and appreciates the newspapers, passes by a sort of evolution to read the magazines of the day, and may reasonably be expected to take an intelligent interest in politics and in various lines of scientific subjects.

The grammar school training can not reasonably be

expected to make men specialists in any direction. Its training must be general, along a number of lines, and yet this training taken as a whole is a very essential part of a liberal education.

Its greatest contribution is in the line of teaching a correct use of the English language, in its relation to the needs of people in the ordinary affairs of life.

This is a distinct function of our American grammar school; and the English thus taught cannot be eliminated from a liberal education, for we are inclined to accept Mr. Arnold's definition of a liberal education as "power to know ourselves and the world."

The English language is worthy of such prominence. It is our national language; it is rich in literature; it is a vehicle for thought that may be used by men in all conditions of life; and its correct use should be taught to the masses of our people.

The Emperor of Germany demands greater attention to the study of German as essential to the development of a national spirit and unity among the German people.

This is eminently necessary in our country; for our people are gathered from the four quarters of the globe. Our language should be free from dialects, and may be free. The English of Boston is the English of Texas, of New Hampshire, and Oregon. It should be the official language of Maryland, and Wisconsin, no less than of California and the Carolinas.

We are a peculiar people, peculiarly constituted, and, lest we be broken and scattered among the Egyptians, we must regard the teaching of English in our schools as the pillar of cloud by day and of fire

by night to guide us to the promised land of becoming a homogeneous people.

English is a classic literature, rich not only in the contributions from the eastern, but also rich and growing richer by the contributions from the western hemisphere. The grammar school stimulates to a knowledge of some of this literature and induces more extended study.

It becomes the ready vehicle of thought for the orator, dramatist, poet, and philosopher, and yet is as readily used in the transaction of business and the intercourse of men in the humblest walk of life.

The Yorkshire man in the island whence comes our English tongue cannot understand his neighbor in Cornwall, without an interpreter; and yet both live in a country smaller than New England.

Shall our national tongue break into dialects, so that our people shall need interpreters to understand the speech of people from different parts of the country? Shall we accept a *patois* or "pigeon" English for the language of Shakespeare, Milton, Webster, and Bryant? It is, in our opinion, a very essential part of liberal training to teach the use of our English in its purity, so that in its correct forms it shall be used and recognized throughout our broad land.

The grammar schools of our cities perform a noble service in this regard. Taking the child where the primary schools leave him, they carry the work forward, dealing with maturer minds and carrying the language into the homes where it would not otherwise be found.

This training enables us to know ourselves as component parts of a national unit, a homogeneous peo-

ple; and knowing ourselves better, we can safely essay to know the world.

Latin and Greek, and even French and German, may be properly regarded as belonging to a liberal education; and, if one could spare the time to become familiar with them, it would be well; but a man might know a little of them all and still not be liberally educated, if he were not able to express himself well in English, his vernacular.

He is liberally educated in a very gratifying degree, who is able to express himself plainly and well both in oral and written English, even if he be wholly ignorant of any other language.

In the language of an eminent New Hampshire man, we should occasionally take observations for our latitude and longitude to ascertain whither we are drifting.

It is well for us to do this educationally, lest certain tendencies be developed which may cause us trouble in the future.

We think that our national government should consider the matter seriously of demanding the study of English as a primary essential of every school in our country below the grade of the high school.

We are in the midst of a trying period in educational affairs.

While friends of our schools are discussing what to teach and how to teach, the alarm is sounded here and there to marshal forces whose aim is to prevent the State from teaching at all. The camel's head has already appeared within our tent. At present it is only Wisconsin. Shall the camel share the tent with us? Shall the camel drive us from the tent?

Let the official language of our country be taught in detail in our common schools, one and all. Let there be one official language and only one for our broad country. Let the joss house of China come through the Golden Gate of the Pacific; let the mosque and the Koran come through Castle Garden. They can claim protection under our constitution, but let us draw the line somewhere. Jew, and Gentile, Greek, and barbarian must learn English in our schools and, through English, learn patriotism.

Thus armed even with small stones from the brook of pure English, we may safely cope with Goliath, or indeed with the Philistines from every quarter.

What grander work has any nation than self-preservation and growth?

We are experiencing the growth, and shall we lack the element of self-preservation?

DR. C. C. ROUNDS, Principal of the State Normal School, Plymouth, N. H., continued the discussion of Mr. Hill's subject. He said:

I agree with what the speakers have said in regard to the work now done by good grammar schools. Yet there is something more to be said. Something more should be done for that vast majority of our people who never have the privilege of high school education. Faraday said some years ago that the great defect in the average intellect was the lack in judgment, which is best cultivated by the study of science.

We cannot fail to notice that most of our people are almost utterly lacking in ideas of science and in scientific habits of thought. To supply this lack, there must be introduced into the common and grammar school

courses of study more instruction in science, especially in the natural sciences, now almost entirely absent from these courses. Now a hiatus is apparent, in the spirit and method of teaching, between the kindergarten as it has been so finely described to us and the grades beyond the grammar school. In kindergarten and primary school, much is made of the cultivation of the powers of observation; in the high school instruction in natural science begins. Elementary science must come into the grammar school as a regular and important element. I protest against the attacks made upon the grammar school. I hope it will not be held profanity, outside of Massachusetts, to name with mild disapproval the distinguished scholar occupying an eminent place in education—President Eliot—who has so vigorously condemned the work of the grammar and the common school. I have been surprised, as I have heard and read the expressions of this gentleman, that he should venture to speak thus of matters of which he evidently knows so little.

Yet there is here a problem which must be met in the immediate future. More can be done.

The boy or girl in Paris at the age of 14 or 15 certainly has a broader, a more systematic education than have the boys and girls in our cities.

One of the speakers has indicated the results of the work in drawing now done in the grammar school. An important element in some of the University-extension work in England is the course in what is called *art appreciation*. We need more cultivation of the power of art appreciation, more cultivation of the sense of beauty. Something of this must come into the education of the people.

I fully agree with what the speaker has said of the value of the moral training incident to the work of the grammar school. Yet this is not enough. There should be a more systematic treatment of morals as an integral part of school work, a well arranged, systematic course, graded in subjects and methods, according to the age and development of the pupil, from kindergarten to high school. They do these things better in France.

It is not revolution, but adjustment to meet new conditions, that is needed. It is a question of ratios, of relative values. We should determine what must be done for the pupil, make our time tables with reference to the demands and conditions, and bring about such changes in conditions, in length of school day and school year, etc., as the case demands. The common school course must have more of significance and completeness in itself.

When the problem is fairly understood, and the necessity fully comprehended, the solution will be found.

IV.

THE SERVICE RENDERED BY THE SECONDARY SCHOOL.

BY CECIL F. P. BANCROFT, PH. D., L. H. D., PRINCIPAL OF
PHILLIPS ACADEMY, ANDOVER, MASS.

The secondary school has the great advantage and the great disadvantage of being a middle school. It rests upon the primary, intermediate, and grammar schools which precede it, and like them it has to pass the ordeal of review and criticism by the schools that follow. The service rendered to liberal education by the secondary school is accordingly prescribed and conditioned by the work of the elementary school on the one side and by the requirement of the college on the other: by the amount, quality, and method of the work below it; and by the standard of proficiency, the rate of progress, the method of instruction, and the subjects taught in the schools which succeed it. The American secondary school is a part of a large, loose system of schools, excellent according to the excellency of all the other parts, and depressed by all their defects, confusions, weaknesses, and failures. It may be very good in itself, or may be very poor in itself; and it may rest upon either good or bad schools and lead up to either good or bad institutions of the superior grade. It is impossible, therefore, to consider the secondary school,—what it is, what it does,

what it needs,—without rather frequent mention of the elementary schools on the one side and the colleges on the other and a seeming invasion of the field assigned to others under the general topic of the day.

The separate subjects assigned in the present discussion recognize happily the various grades of our schools as linked together by one common bond, each a factor in a distinctive discipline, which is rightly called a liberal education. The conception of a liberal education is thus extended beyond the confines of four college years. The liberal character of the primary and the secondary stages is distinctly recognized, and the process of education is conceived as essentially one. In fact, distinction of grades of schools—whether they be three or four or more in number—is founded upon the subjects taught, the length and difficulty of the tasks, the amount and kind of assistance given to the pupil, and other things of this sort, rather than on difference of motive and end in view, of faculties addressed, and of methods employed. It is the same human understanding that is educated, whether at the low, tessellated table of the kindergarten or in the stately aula of the university, whether the pupil be a child of infantile years or a young man in his mature prime. There is indeed a true order of studies and the mind develops along certain recognized lines in a true genesis and sequence of powers, but I know of no intellectual or moral element in the man which is not found in the child, though, waiting it may be in the case of the child to be awakened, or struggling perhaps to set itself free. In some respects, the primary education is the most truly liberal of all, most free from all admixture of uneducational influences,

whereas in the secondary schools and still more in the higher ranges of education distracting influences, all legitimate and rational perhaps in themselves, but somewhat aside from the pure and simple processes of education, thrust themselves in, like respectable but uncongenial guests at a family reunion. If nothing more be accomplished to-day, than to give fresh emphasis to this extended meaning of the word 'liberal education' so that it shall include the whole curriculum of non-professional, non-technical studies, from the kindergarten to the university, it will be enough to justify the time and prominence assigned to this discussion.

President Hall and others have called our attention on several occasions recently to the intensity and moment of the present discussions in questions of education. Never before in our pedagogic history have they been so many and so urgent, never before conducted with so reasonable a temper, with so much earnestness, insight, and sympathy, with so much promise of thoroughness and of excellent results. They concern not our schools alone, but all the interests we hold dear. They have enlisted the enthusiasm of representative minds of all classes. They have called out princely gifts. Results have been reached already which have changed the aspect of American education and which appear in all our intellectual life, and as really though not so conspicuously in our social order.

One noticeable thing in the present phase of the movement is that it began at the top, in university expansion and reform, and has worked downward into the secondary schools, and below them into the

elementary schools. Indeed the stress of interest just now is in the primary instruction. In some particulars, the middle schools have felt latest and least the edge of current criticism and the touch of recent reorganization. It is easy to see the reason. Psychology finds its most fascinating field in the child mind; and at the other extreme the strife for the special, the technical, the practical, has surged around the walls of the colleges and the universities, rather than through the curriculum of the secondary schools. The new education has been building colleges for women, has been devising and introducing the elective system, has projected and planted true universities, and has created our great technical schools,—schools still in their infancy, but it is the infancy of a Hercules who strangles serpents in his cradle.

That earlier movement which we gratefully associate with the memory of Horace Mann, which stirred in the establishment of this Institute of Instruction and of the first educational periodical and of the "Teachers Seminary" at Andover, and which resulted in the establishment of state normal schools and a little later created our system of free public high schools, had a different inspiration and took a different direction. The poverty of the instruction in ungraded public schools was the starting point, and the movement was from below upward, not indeed along the straight line of a logical theory, but up the slow spiral of a true historic evolution. The primary instruction called for better teachers; the normal schools were created to supply them; the better trained community called for longer and severer courses of study. Hence, arose our strong system of public secondary schools.

Secondary education previous to this movement was in a very undeveloped state. Few subjects and little time were set apart for it. It is only lately that we have come to regard a certain group of subjects as its appropriate field, and four years as its suitable period. At the outset, we had but two grades of institutions, elementary and collegiate. Between these two we have developed the secondary school; side by side with the college we have inaugurated the technical school and the scientific college; superior to these, post-graduate courses of a university type, and professional schools of law, divinity, medicine, etc. And this elaborate development has been American, the product of our own life, to meet our own peculiar necessities.

Previous to the establishment of the high school system, and to a large extent since then, the secondary education has been secured through other agencies. Private instruction has carried many young men and young women through every recognized stage of training, and in many instances there has been secured in this way an adaptation of instruction and drill to individual capacity and ambition so exact, so judicious, so inspiring that the finest culture has been the result. Indeed the ideal of discipleship is this: an eager mind, in quick response to wisdom, learning, skill, and power; a soul kindled by the ardor of a disciplined and lofty nature which devotes itself conscientiously and lovingly to what Plato calls the divine art of teaching. So Plato's teacher taught and Plato himself; and side by side with the lists of great teachers in all ages run other lists of gifted pupils, who have caught the spirit of their masters and been

molded (to use Ruskin's fine phrase) "by watching, by warning, by precept, and by praise, but most of all by example," as if they alone received the instruction in a personal tuition, even though many others heard the same counsels and conned the same lessons. Such teachers, alas, are rare, or such pupils would be more frequent. The good teacher, especially in the secondary school, must individualize his school. In this part of the country, there is a wide-spread prejudice against private tuition, but in time it must give way. Mass teaching is impossible in the case of young minds.

The colleges themselves have often been forced to give the secondary instruction, and some of them in a culpable timidity still refuse to surrender it, though the reasons for retaining it in most parts of the land have almost wholly passed away.

The endowed local Latin schools of our fathers, not many in number but worthy of great praise, and the public Latin schools of a few favored cities, where from the beginning liberal culture was "a habit, a principle, and a fashion," combined the functions of the elementary and the secondary school, and at times, as we should think, invaded the reservations of the august colleges themselves.

Besides these three or four considerable agencies, there sprang up a little more than a century ago another, under the not altogether appropriate or modest name of the "Academy," which extended, defined, and dignified the distinctive work of secondary education and improved the means and methods of the whole range of education. In the language of the late Dr. Hammond in a report to the state of Massa-

chusetts, "A system of middle schools for the benefit of the whole people, in distinction from the special wants of a particular locality, was originated by Judge Phillips, near the close of the American Revolution."

Adopting many of the features of the local schools, private and endowed, which preceded them, these new schools also took to themselves many features of the colleges, boldly aspired to the widest patronage, incorporated themselves under state charters, acquired property, and were administered like the English foundation schools as a public charity. The oldest one was projected by men who expressed in their constitution the earnest desire that "the advantages of it might be extensive and lasting, and that its usefulness might be so manifest as to lead the way to other establishments on the same principles." Persons most familiar with the history of New-England education and of our national education know best how rapidly the academy idea was adopted and what a distinct impulse was given to liberal education thereby. Many "establishments on the same principles" were organized, first in New England, then in New York, in Ohio, and in the states farther west in succession as they were settled, and to some extent in the south. They flourished, and the number increased down to the time when the public high schools were organized. Then for a time many of them languished and some of them suspended their work, and still others perished; but in the past twenty years many of these institutions have been revived, new ones have been established, and more than two million dollars have been given to them in New England alone within the past ten years. They are engaged almost exclusively

in secondary work and constitute an important and interesting group in our system. They went before the public high school and did an incalculable service in preparing the way for it.

This brief survey of the instruments of the secondary education needs for completeness separate mention of private schools established chiefly in cities and large towns, private enterprises, without charter and without endowment, appealing chiefly to local patronage, and taking no responsibility for the pupils except as day-scholars in the school-room. The number of such schools is increasing rather rapidly. Their reputation is often of the best. Their business character is subordinated to their educational mission. They have won confidence by deserving it and constitute already an important source of supply of well-trained boys and girls to the colleges and to the community.

These various kinds of schools, and others which cannot be closely classified, differ in comprehension and emphasis, in the kind, order, and proportion of the studies pursued, and the direction the pupils take when they finish the curriculum. They are alike in that they do substantially secondary work, and do not do elementary work, except provisionally or incidentally or by way of review, and they do not do collegiate work. They are our secondary schools as nearly as can be under our voluntary system, and they work well together, supplementing and assisting one another, covering the wide field in a generous rivalry. They broaden for every child the possibilities of securing a truly liberal education.

The range of studies belonging to the secondary schools is a more difficult subject. The line of divi-

sion at the bottom, separating them from the elementary schools is however fairly well established. It has come about of itself and been confirmed by custom and by legislation. It is an arbitrary division, no doubt; but consent gives it permanence and value. The philosophy of education as a distinct branch of professional preparation for school administration and instruction has not had its place long enough in any large way to modify prevailing ideas of what is the proper range of primary studies. But the upper line, the division between the school and the college, has been an uncertain, shifting thing; and there has been no general agreement as to where it should be drawn, and no prevailing usage as to where it is drawn. France divides the secondary from the superior instruction higher up than we have dared to, and the same is true of England and Germany. Our secondary education has developed later than theirs and serves a different purpose. But this is no excuse for the present demoralization. Fitting for college, for example, means almost as many different things as there are colleges, and fitting for the science schools means things more mixed and heterogeneous still. This is not altogether a misfortune. It is in harmony with the genius of our people and with our methods in almost everything else. No one college is the best for every boy; but, in the present lack of system, there is great danger that the right boy will go to the wrong college. There would be diversity enough for all our needs, if the colleges on the one hand and the scientific schools on the other should agree upon an entrance requirement; for no two colleges would have the same standard of proficiency under

our present system of independent entrance examinations. State examinations are not likely to be accepted, though the New York experiment is said to do much good and surprisingly little mischief, and western methods of admission on the school certificate are said to be gaining in favor. What is to our present purpose is that there should be some definition of the work of the secondary school at its upper limit, as there is already at its lower boundary. It does not so much matter where the line is drawn, as that it be determined. At present, so far as the secondary instruction leads up to the superior grade and connects with it, there is confusion and misunderstanding which makes the work of the school unnecessarily difficult. There is encouragement, however, in the unwritten code of courtesy, and a growing consensus of opinion, which is carrying all our institutions forward, rebuking or at least restraining eccentricity and excess of requirement, and so leaving the program of the secondary school more consistent and assured. The rapid and yet orderly development of a distinct secondary grade, the better understanding between the colleges and the schools, the more frequent conferences between the several colleges, and the more active and open interest on the part of the public in school problems are some of the causes leading to a mutual understanding and agreement as to what the middle schools ought to teach. This understanding cannot be formal, it is not yet what it ought to be, nor so good as it promises to become.

The same cannot be said of the scientific schools. They still, like the antediluvians, do that which is right in their own eyes. They do not trust advanced

work to the secondary schools. They do not come together in an effort to harmonize their requirements. The individual scientific colleges as a rule require for admission less than the parallel colleges and less than their own courses imply and demand. Hardly any greater relief or greater boon could be given to the schools, than for the scientific schools to unite in a high, reasonable, and uniform requirement for admission. The secondary schools have a right to ask for this, for those of us who have been teaching twenty years or more know that the classical colleges have handed down to us, to our advantage as much as their own, a very considerable amount of new work. It is not many decades since algebra, plane geometry, the elements of French or of German, history, physics, (or some other science subject,) and English have been added to the list of studies in the preparatory courses. In fact, it is not so very long since a considerable amount of Latin, a moderate amount of Greek, and a little arithmetic admitted boys to Harvard College. Experience shows, if it shows anything, that a gradual increase of requirement may be laid upon the secondary schools and they will respond to the demands thereby made, if the requirement be announced long enough beforehand, and if the colleges unite in making it. Hasty changes, in the way of experiment by desultory process, are a vexation and a strain to which the schools ought not to be subjected. Inasmuch as there is no natural limit between college subjects and school subjects, what liberal education requires is that a certain definite work be assigned to the secondary school, that the separate subjects be pursued with a definite scholarly aim, and

after a sound pedagogical method, and according to a recognized standard of proficiency. There is no branch of learning which may not be pursued as an elementary subject, or in a secondary school, or in a college, or, finally, be made the basis of a special investigation in a university course. But there are some subjects of greater human interest than others, and it is necessary to keep in view the possibility that school days may cease abruptly for a given pupil at any point in his career, and that they will cease in spite of all our efforts, in the case of the majority, long before the end of long, hard courses. Certain knowledges are of vastly more worth than others, and one great purpose of all schooling is the acquisition of knowledge, as well as the acquisition of power. The blending of these two distinct purposes is essential in any wise scheme of general education.

Here is the great problem of the secondary school. How can courses be devised which shall meet at once the wants of pupils soon to be plunged into the distractions and responsibilities of their vocations, and of that other and smaller number who have before them the prospect of long courses of further training? In one of our largest preparatory schools ninety-four per cent. of the graduates go to college and six per cent. to work; in an average high school it is the six per cent. that go to college and ninety-four per cent. to work. But if boys and girls are not to enjoy the benefits of collegiate, university, and professional training, it is all the more important that they should receive a liberal training as far as possible in the secondary school. I have in mind a high school in a flourishing city whose course of study I am told has

been again and again revised, in the interest at one time of the scholars who do not go to college, and then by reaction in the interest of those who go. In another high school which I know, the scholars are not fitted for college, nor for a technical school, nor for advanced standing in a special fitting school. Dr. McCosh has well said: "The secondary school is the main means of calling forth talent in any country, seizing the most prominent boys from the elementary school and sending them into the college, where they have the means of distinguishing themselves and benefiting their country." But such a course of study as I have described seems contrived to hinder boys from entering the upper schools.

It is unspeakably important under our constitution and our institutions to multiply the number of highly educated and widely educated men. The sparsely populated regions, the country towns, have supplied heretofore a surprising proportion of the intellectual leaders of our complex life, and it ought to be so still. Our secondary schools ought to embrace such subjects, and prosecute them in such a way, that boys and girls in country towns, as well as in large cities, shall have the opportunity to reach the college and the university. This is a service which the secondary school, of whatsoever name, can render to the cause of liberal education. When pupils find themselves prepared almost before they are aware of it for the upper courses, they are invited and encouraged to do what at the outset would have seemed to them impossible. All the roads in Italy led to Rome, and many a traveller setting out for a brief journey found himself lured on by the circumstance of being fairly on the way, till at

last he came to the seven hills and beheld the glories of the eternal city. It is no small service to our youth to keep open before them, till the last moment, possibilities of the best education our civilization offers. This is a noble function of the secondary school. As we have seen, it is possible for it to be a hindrance when it should be a help. How many pupils lament, when it is too late, that their studies had not been shaped for the superior courses which now they feel obliged to forego. For example, no argument is more convincing to an ambitious boy when he comes to the question of taking Greek than this: "If you take Greek, you keep open the door to every college and to every profession, and you close the door to none. At the worst you only delay for a little the pursuit of other branches. This is incidental. If you refuse Greek, you close the door to some colleges and bar the way to some professions. This is fundamental. There is a point at which you must turn resolutely away from open doors which will never stand before you again. For the present, it is possible for you to keep a large freedom of future choice." A similar line of argument can be used with ingenuous youth who need to have held up to them a great ideal of attainment. This is liberal education in the secondary school, a course which keeps open all the avenues of study and of employment as long as possible, which supplies a large equipment for the special work which must at last be chosen and which ought to be chosen with as much maturity in store as possible. He who specializes too early is liable to specialize amiss. He who specializes without a broad outlook and a broad foundation is likely to fail of the best achievement in his

specialty. He who does not specialize at all is likely to make no deep impression on his fellow men, and leave no lasting product of his labors. One reason why the college age is so high, so lamentably high as some men think, is because the men spent their early years in other lines, and came late to the desire or to a sense of the possibility of going to college. No doubt time is wasted in the elementary schools and in the secondary schools, but the difficulty is mainly in the fact that the pupils begin the required special preparation late.

What is the remedy? There is no radical remedy, but a partial one is found in so shaping courses of study that the decision to go to a classical college, or a scientific college, or not to go to any college, may be postponed without detriment as late as possible. A second remedy is in making the requirements for admission to the superior institutions alike in as many subjects as possible. I have no doubt that the scientific schools would be greatly benefited by requiring as much Latin as the elementary course for Harvard College, and the classical colleges by requiring as much mathematics as the Massachusetts Institute of Technology requires for admission,—and so on, through a wide range of requirement. A third remedy may be found in multiplying the so-called elementary examinations for college and reducing the advanced requirements proportionately. A fourth remedy would be in setting for these examinations subjects which ought to find a place in the program of the school whose pupils do not go to a superior school. These reforms have been ably advocated, some of them more than others. They are not a solution of the problem.

There can be none, but it is possible to multiply greatly the number of pupils who will aspire to and attain a truly liberal education.

We have fairly well emancipated ourselves from the old tradition that certain subjects are liberal and all others are not, that the humanities alone are capable of imparting that tone and temper of mind which constitute true culture. We have learned that the love of truth, and the passionate love of the search for truth, may be reached through sciences, through history, through modern literatures, as truly as through the conventional Latin, Hebrew, and Greek which constituted the staple studies of our early colleges. We are beginning, at least, to see that manual training may be pursued in a liberal spirit. The habit of industry, the open mind, the love of order and duty, the satisfactions of personal worth, the appreciation of nature, art, literature, self-sacrifice, goodness, and virtue, the disciplined will, the reverent spirit,—these can come into the schools and make them what the colleges have been in so eminent a degree, nurseries of a true and manly honor, world-wide sympathies, graces of thought, feeling, and expression, of dignity, sobriety, and moral earnestness, and of a thoughtful, Christian piety. Not what we study, but how: this is the main thing. It is a pity that the word "master" has been revived in connection with our school nomenclature. The teacher is no magistrate. The magisterial school-master has gone. If our schools are doing more and better work, it is because we have a new teaching and a new discipline.

It is the fashion to find fault with the secondary schools. But as we have seen, they are not yet fully

installed. They must repair mistakes and defects in the elementary work on which they rest. The colleges and scientific schools do not yet give them a fair and definite field. They are very unlike one another: public high school, academy, private school, preparatory school. But their hour has come. Some of our best teachers are in them. The superior instruction and the elementary instruction are in friendly though sometimes clumsy coöperation with them. Private munificence, individual enterprise, and the public treasury are furnishing support. We are trying to do what Matthew Arnold after two visits to the continent bade England do: strengthen and improve the secondary schools.

DISCUSSION.

MR. C. W. PARMENTER, of the Latin School, Cambridge, Mass., opened the discussion of Dr. Bancroft's subject. He spoke as follows:

I am deeply sensible of the honor conferred by an invitation to address this distinguished body of teachers; but my remarks must be very brief, for I am not unmindful that time is precious and fleeting and that I am to be followed by a gentleman who has far greater claims upon your attention than I have.

With the general thought presented by the distinguished essayist, I am fully in accord; and even if I were inclined, at this moment, to differ with him at any important point, I should hesitate to take issue without further deliberation. Neither will I attempt to comment upon the paper further than to say that I have listened to it with intense interest and

profound satisfaction, for no commendation of mine could add to the effect of what was so uniformly excellent.

The single thought which I wish to express at this time faces the future rather than the past and relates, not to the contribution which the secondary schools have made and are making to liberal culture, but to a contribution which, in my judgment, the present age imperatively demands that they should make in larger measure. Every one is familiar with the marvellous material progress of our time. Never before has the world seen such wonderful means of communication; such speed, safety, and luxury for the traveller; such conveniences and comforts, even in the houses of the lowly; such facilities for the rapid transaction of business; such astonishing production and accumulation of wealth. Harnessed lightning transmits our thought, lights our homes, conveys us from suburb to centre, and turns the wheels of many a busy industry. Science seems destined to command all the resources of nature and to make them yield their contribution to man's comfort and enjoyment. The wildest imagination could not have conceived, a quarter of a century ago, the marvellous appliances which minister to our daily comfort and convenience. I merely state facts of common observation; no language of mine can properly characterize the material advancement of this age.

I apprehend that the thought of educators has dwelt but little upon the fact that this progress represents the labor of a relatively insignificant number of men, and that the masses have little comprehension of the principles involved in the mechanisms in daily

use and have no conception of the habit of mind which is essential to their production.

My plea, then, is that the secondary school of the future ought to do vastly more than has yet been done to provide efficient training in scientific methods. Some distinctions among men are of little moment. It may be interesting to note that one man is taller than another or more uniformly joyous, but no one attaches importance to such differences. But when our observation of conduct enables us to assert unhesitatingly that one man is better than another, there is universal assent to the importance of the distinction.

So, also, various lines of study produce interesting but unimportant differences of result. The linguistic faculty may be cultivated by the study of Latin, Greek, French, or German. A variety of considerations determine for each student upon which of these to place the emphasis, but whatever the choice the resulting mental culture is essentially the same. Similar statements can be made of various branches of mathematics. But the right study of science is calculated to develop peculiar mental powers not called forth by any other training.

The scientific quality of mind is characterized by the power to observe accurately, to discriminate clearly, to classify properly, to draw right inferences from observed phenomena, to judge correctly concerning probable sources of error, and to place above every other consideration a supreme regard for truth. It is this quality of mind that spans great rivers with bridges above the tallest masts, that tunnels mountains, that invents telephones, that contrives electric

cars, that reproduces the art treasures of the world and makes them the property of the common people, that discovers the causes of disease and removes them, that investigates social phenomena and suggests remedies for existing evils, that purifies the water supplies of great cities, that watches the plumber and insures our lives against blundering ignorance, that makes the comforts and luxuries of modern life possible, and that controls the most important forces of modern civilization.

If the liberally educated man of the future is to sustain right relations with his fellow-men and to aid materially the advancing thought of the age, his training must be calculated to enable him to understand the methods of science and appreciate their value. If the secondary schools are to meet the obligations imposed upon them, they must give ample time to scientific work, in laboratories adequately equipped and in charge of men of assured scholarship who recognize the vast difference between cramming the memory with scientific facts and developing the spirit of scientific methods.

When the love of truth gains the mastery of the heart, it wakens the mind to an energy which no inferior principle can kindle. It is the glory of science that it tends to free its devotees from narrowness and prejudice and sends them forth to ennoble the common duties of life, habitually influenced by motives and hopes that look forward into eternity.

GEORGE A. WILLIAMS, PH. D., Principal of Vermont Academy, Saxton's River, Vt., continued the discussion of Dr. Bancroft's address.

He said: Dr. Bancroft has spoken especially of the

work of the secondary school, as related to the work of the lower schools on the one hand and the colleges and universities on the other. I wish more fully to emphasize the work of the secondary school in its relation to life, its duties and its responsibilities. However important the work of our secondary schools may be, as related to the other schools in our educational system, and however necessary the help they give may be to those who take higher courses, it nevertheless remains true that their most important work is done for that very large proportion of our students who do not do higher work, but who with us finish their school preparation for the duties of life.

We should not, in our search for better methods and a better adjustment, lose sight of the vital fact that our boys and girls have, not only minds to be trained, but immortal souls to be developed. We want earnest, enthusiastic scholars; we want vastly more true manly men and womanly women. Mere intellectualism is not desirable; but the intellect trained in harmony with God's law and in reverent love for Him. I was pleased to hear Dr. Rounds this morning pleading for sound moral training; but we must not lose sight of the fact that no system of ethics can have a real basis or sanction, save in the religious sentiment. Hence, I plead for strong Christian influence in our secondary schools. I would not have them Sunday schools, nor theological seminaries, nor sectarian in their teaching, but I would have them *Christian*.

The denominational academy is recovering itself and will still have an important place among our schools. Some one says that the denominational school is the Roman Catholic school without its mo-

tive ; but the Roman Catholic idea without its motive is right, and we shall find it so. Let us work along the lines of God's plans for human well-being, not putting aside or ignoring the eternal verities.

Let us be "workers together with God," in making the boys and girls "thoroughly fitted unto all good works," ever keeping before our minds our responsibility toward them as moral, intellectual, social, and spiritual beings ; and let us remember, what we too often forget, that intellectual training is after all secondary, while true manhood and womanhood is what the individual and the world most need.

V.

CERTAIN TENDENCIES IN THE DEVELOPMENT OF THE AMERICAN UNIVERSITY.

BY JOSIAH ROYCE, PH. D., PROFESSOR OF PHILOSOPHY IN
HARVARD UNIVERSITY.

NOTE. Professor Royce's address was contributed to *Scribner's Magazine* for September, 1891. It is here reprinted, by special courtesy and permission of the publishers, as it appeared in *Scribner's*.

PRESENT IDEALS OF AMERICAN UNIVERSITY LIFE.

By Josiah Royce.

Recently, in looking through some papers on file in our college library at Cambridge, I came upon a leaflet, dated New York, November 2, 1853, containing a report of a committee of the trustees of Columbia College, upon several matters, one of which is "The Establishment of a University System." The report also treats of proposed "Changes in the Collegiate Course," and defines, according to the ideas of the signers, "the Mission of the College." This mission is "to direct and superintend the mental and moral culture." "Mental and moral discipline, it is agreed," says the leaflet, "is the object of collegiate education. The mere acquisition of learning, however valuable and desirable in itself, is subordinate to this great work. . . . The design of a college is to make

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perfect the human intellect in all its parts and functions; by means of a thorough training of all the intellectual faculties, to attain their full development; and by the proper guidance of the moral functions, to direct them to a proper exertion. To form the mind, in short, is the high design of education as sought in a College Course." The report hereupon proceeds to note that, unfortunately, this sentiment, "manifest and just" though it be, "does not meet with universal sympathy or acquiescence." "On the contrary, the demand for what is termed progressive knowledge and for fuller instruction in what are called the useful and practical sciences, is at variance with this fundamental idea. The public generally, unaccustomed to look upon the mind except in connection with the body, and to regard it as a machine for promoting the pleasures, the conveniences, or the comforts of the latter, will not be satisfied with a system of education in which they are unable to perceive the direct connection between the knowledge imparted, and the bodily advantages to be gained. For this reason, to preserve in some degree high and pure education and strict mental discipline, and to draw as many as possible within its influence, we must partially yield to those sentiments which we should be unable wholly to resist." The committee therefore "think that while they would retain the system having in view the most perfect intellectual training, they might devise parallel courses, having this design at the foundation, but still adapted to meet the popular demand."

After this fashion, then, the members of the Columbia committee propose to meet the public desire of their time for some modification of the traditional col-

lege course. The report next passes on to the question of the establishment of higher "University" courses to supplement the collegiate work. The members of the committee hope the desire for such additional instruction "may in part be reached by the plan suggested by them. But they are admonished that this design is not free from serious difficulties." In consequence the committee "simply report this subject as having engaged their attention." The "plan suggested" is simply the establishment of "parallel courses" as a concession to popular demands.

The situation at Columbia in the early fifties, as thus displayed, is not without decided interest even to-day. We have heard of this situation more than once since: On the one side stands the abstract ideal of something called "the perfect moral and intellectual discipline of the mind." On the other hand stands at least a portion of the public, demanding "practical and progressive knowledge." The lovers of the abstract ideal accuse this public of being "unaccustomed to look upon the mind except in connection with the body," while they of course imagine themselves, as lovers of ideals, quite able to accomplish the feat of "looking upon the mind" without any such connection whatever. They accordingly feel and express some contempt for the persons who cannot follow them in their abstractions. But these partisans of the ideal are still reluctantly forced to confess that just such "looking upon the mind in connection with the body," has somehow made the Philistine public wealthy, and socially powerful. Hence one must humor the Philistines a little, not by abandoning one's traditions about collegiate work, but by offering a few

"parallel courses" of a more "progressive" sort. Meanwhile, however, in this connection, there soon appears an unexpected bearing of the new undertaking upon instruction of the higher "University" grade. The new courses, namely, will very naturally be offered to graduates of the traditional college work, whose minds having been more or less nearly "perfected" by the best system of "intellectual and moral discipline," may now be more safely supplied with "progressive knowledge." However, one feels that such an undertaking, even in case of graduate students, has its dangers. One is "admonished that this design is not free from serious difficulties." One is disposed to report the mere fact that the thing is under consideration and to wait further events. By such halting steps, in the midst of such serious perplexities, despite such unfortunate misunderstanding of the unity of life's great business—yes, even by means of this very conflict between the lovers of the "practical and progressive" and the people who "look upon the mind" out of "connection with the body," has the cause of the American University slowly and yet happily progressed during the last forty years, until to-day there is so much to rejoice in, and still so much before us to undertake.

It is the purpose of the present paper to give a brief sketch of certain facts relating to the development of the modern American University, to suggest some of the ideals that university instruction just now has in mind in our country, and to indicate hereby some of our present problems. I shall not care to speak from the point of view of any one institution as such. The "American University," using the word as a conven-

ient general name, is just now at a critical point in its development. A number of our leading institutions are together engaged in the work of "modifying the collegiate course," and of supplementing it by "university work." If the report of Columbia's committee in 1853 very fairly represents the situation in those days in all our most prominent colleges, the latest report of President Low is an important indication of the present tendencies at work in more places than one. Meanwhile, the general public has frequently heard of late of the office which the University ought to fill, and is familiar, although perhaps even now not too familiar, with the idea that a University is much more than the traditional American "College" of former days, and that "University work," in the stricter sense, means work above the collegiate grade. A great deal has also been written about the function of the University as a centre of original research. I should not try to add to the already extensive literature of the topic, were I not impressed by the thought that we still, most of us, imperfectly understand the forces that are just now at work to produce this modification of the character of our academic institutions. The opposition which the Columbia committee made in 1853 between the "disciplinary" ideals of the traditional College course, and the "practical and progressive" needs of the relatively materialistic public, is still in a measure with us. But meanwhile, what many fail to understand is, that just these relatively "materialistic" demands and interests of the public, which have occasioned the call for "practical and progressive" studies, have been among the most potent factors in precisely that reform of higher study

which is now making the American University daily more ideal in its undertakings, more genuinely spiritual in its enthusiasm and in its scholarship, and really far less Philistine in its concerns than was the American College of former days. This, to my mind, is the most deeply instructive feature of the modern University life. In 1853 we find a representative committee defending a really fine and ancient ideal of collegiate "discipline," against a thoughtless "practical" and "popular" demand. The history of academic life since has been in large part the history of the triumph of just that popular demand. Has the result been the degradation of our academic ideals? No, the result has been the evolution of the University ideal among us—an ideal higher, more theoretical, more scholarly, less "popular" in the evil sense of that word, and in the best sense more unworldly than its predecessor. Let us look a little at the history of the process, and see that this is so.

I.

A GREAT deal of this history I must indeed pass over here, partly because its outlines are familiar to every reader, partly because its details are too minute and too imperfectly accessible. What everybody knows is that the immense extension of the natural and physical sciences within the last half century has been of great significance in altering men's views as to the educator's business, and especially as to the business of the colleges. As the Columbia report shows, the interest in what we now call University work, was for a good while associated, in the minds both of those who magnified and those who belittled the importance

of such work, with the growth of what were regarded as materialistic opinions and ideals. Strange, and yet inevitable and most instructive, union of the spiritual and the bodily concerns of men! The traditional college course was to "fit"—yes, so far as might be in a four years' curriculum, to "perfect" a man, by "culture," for this world, and for entrance on the future life. To this end, before he entered college, one first taught him the rules of Latin grammar, and all the even remotely conceivable forms of τύπτω. Then, in college, one not only continued this drill, but brought him "into contact with the greatest minds of antiquity," by teaching him to analyze their written words and sentences as they never could have thought of doing themselves. This plan was indeed in its way an excellent one; but after all it did not universally succeed in bringing about the close "contact." Meanwhile, since youth is wayward, one "disciplined" the student, following his steps with constant admonition, ordering his studies as precisely as his hours, and correcting his conduct as carefully as his exercises. By the Senior year he had already become learned in Logic, and a master of the devices of Oratory; and one now showed him the Evidences of Revealed Religion, and refuted for him the principal errors of infidelity. One also grounded him in "Civil Polity," and even taught him something of "Science." In mathematics, too, he was by this time well versed, insomuch that he usually regarded it as the most finished and complete of the departments of human knowledge, and supposed its business and its discoveries to be ended whenever Sturm's theorem had been demonstrated, and the Conic Sections had been exhaustively treated in a single small

text-book. Thus his intellectual and moral life were rounded out; he now possessed "culture." Culture was something precise, definable, transmissible. The possession of it made him great on commencement day, and he "went forth," diploma in hand, into a wicked world which is "not accustomed to look upon the mind except in connection with the body."

Far be it from one who, like the present writer, owes an incalculable debt to those who taught him a form, considerably altered and improved indeed, of this traditional course; far be it from such an one to belittle the worth of what he learned thereby. For very many American colleges, the traditional curriculum more or less modified still is, and will long remain, the substance of academic "culture." And as it has accomplished a great work in the past, so let the traditional college course continue for a season its services in its own field. I suggest its defects in my obviously too meagre sketch; but they were the defects of its admirable qualities. It could not of itself make scholars; but it has helped great numbers to become such. It could not insure true "culture." But many of its graduates have attained a noble culture. Its "discipline" was often crude, but was more often serviceable. I am glad that our most progressive institutions have modified it until it is no longer easily recognizable. I hope that in anything like its old form and methods it will in time become altogether a memory; but I am sure that as such it will be a good memory. Progress removes many old servants from office, but does not forget them, and does honor them. Classical scholarship, for the rest, will not die with the traditional college course, nor

yet pine after that course is dead. Literature will not suffer by the dissolution of the old curriculum. The "greatest of minds of antiquity" will still speak to our world long after the memory of those once tabulated forms of *τύπτω* has faded "like streaks of the morning cloud." "Discipline" will in the end prosper in the midst of much modified academic methods. Religion will arouse as much thought and devotion as ever, even if Seniors are no longer examined on the Evidences. And still all these great interests will look back to the days of *τύπτω* and of "discipline" with thankfulness and with affection. For the old way was indeed good in its time.

Over against this traditional curriculum, however, stood, during the sixties and early seventies, the new "Science curriculum," a still undefined thing, whereof, as many people imagined, Mr. Spencer had given the best general suggestion in his essays on Education, but of whose precise content nobody could speak with assurance. Its ideals were understood to be, as I have suggested, both "practical" and "materialistic." Meanwhile, in giving expression to these ideals, its partisans were fond of using a formula as amusingly abstract and meaningless as that of their opponents, who wanted to "look upon the mind out of connection with the body." This favorite abstract statement of the partisans of the "new" method was, that they, for their part, were minded to study "things," not "words."

It is curious to observe how fond educational theories have often been of such false abstractions. Herein, to be sure, they only follow the fashion of many political theories. Just as "freedom," or "balance

of trade," or "money," have often come to be talked of as if all these were names for things that could exist all alone by themselves, and could be estimated without any reference to other social facts, or to anything else in the universe, so in educational matters, men love purely abstract catch-words, and love judgments founded upon such terms. Which would you rather study, "words" or "things?" Which would you rather possess, "money" or "credit?" Do you prefer the "law," or would you be more content with "freedom" instead? All such questions persist in reminding me of an illustration that I have written down, I believe, more than once before. It is, in case of them all, as if the soul of some still indefinite animal, not yet embodied here on earth, were to be asked, in some preëxistent state, "When you come to be incarnated on earth; which of the two organs would you prefer to have in your body, a great toe, or a tail?" Well, even so it is with that favorite contrast between "words" and "things." Just as the Columbia committee regretted that people would not "look upon the mind" out of "connection with the body," so the partisans of the so-called "science-curriculum" in education used to ask us defiantly whether or no we preferred studying "words" to studying "things." Well, if that meant the same as asking us whether we preferred *τύπτω* and its forms to anything else in heaven or earth, the question might be faced and pretty easily answered. But if it meant to suggest that we could become rationally conscious of things without all the while reflecting upon our own words and the sense of them, the suggestions became too near the absurd for serious criticism. Is

science to cultivate in us a sort of aphasia? Or is reflective self-consciousness to be discouraged as we grow in insight into nature's truth?

Meanwhile, the partisans of the traditional linguistic and literary training, somewhat disturbed in mind by this flippant accusation that their own task was merely a study of "words," were not slow to respond that they were really studying, in their classics and in their literary exercises, not words, but human life. The spirit, they said, is after all the concretest of "things," the most real, the most complex, the deepest-natured. Since this spirit is revealed to us in the history of humanity, we learn the wealth of its laws, the significance of its problems, the profound meaning of its facts whenever we wisely study a great literature. Life is not mere "words." The soul of the classics is more than their language. The minds of antiquity are the objects of a science as serious in its undertakings, as objective in its appeal to matters of fact, as extended in its field as any natural science. Continental scholarship has long since furnished us the example of scientific method applied to this world of truth that is embodied in literature. The science which studies life as it is thus embodied, is called Philology, using that word in Boeckh's sense, and after the fashion already sanctified, since his time, by more than one generation of long-lived and inquiring Germans. The moral, however, of this observation was, that if classical studies were to retain their strong hold on the academic public, they must become themselves more scientific. Classical Philology must transcend the traditional lore of the older college curriculum. The traditional course itself must be the first to modify its

own ideals, and to break down its own limitations. Serious scholarship must be set as an ideal before the minds of even young college students. A higher learning must join itself to the old "discipline." The deadness of the old drill in memorized grammar must be quickened by an endeavor really to bring about that "contact with the true mind of antiquity" which earlier generations of college students had so often missed. Classical study, if it ever was a study of *mere* words, must learn a lesson from the example of natural science, and become indeed a study of the things of the spirit.

So, for the past twenty-five years, many of our best teachers have reasoned, and thus the "materialistic" interests that were once so feared, the "parallel courses" that were once so unwillingly tolerated, have proved to the lovers of true literature and of human life the most inspiring of rivals, the friendliest of allies, although disguised as enemies. The result of this "conflict" between the two ideals of academic work, has been the union of both in the efforts of all concerned to build up a system of University training, whose ideal is at once one of scholarly method, and of scientific comprehension of fact. For the scholar as such, be he biologist or grammarian or metaphysician, the exclusive opposition between "words" and "things" has no meaning. He works to understand truth, and the truth is at once Word *and* Thing, thought *and* object, insight *and* apprehension, law and content, form and matter. You understand it when you both conform your opinions to the facts and comprehend the force and the meaning of your opinions; when you get hold upon realities, and at the

same time interpret your own knowledge of them. There is no science unexpressed; there is no genuine expression of truth that ought not to seek the form of science.

Now, such being the ideal of the scholar's business that has gradually grown up among us, in our best institutions of learning, one result has of course been, that however we have differed as to what we ought to teach to undergraduates, we have all come to feel that the work of the undergraduate course ought to be supplemented by higher courses, wherein the scholar as such should have a chance to say his say, to present his truth, to indicate the recent advance of his science, whether that science were Geology, or Sanskrit, or Latin Grammar, or Mathematics. Thus, then, the coming of the natural sciences, with their high demands upon the learner, and their strong assertion that they taught truth about "things," had seemed at first to threaten the purity and authority of the collegiate course of former times. To prevent such evil effects the device of "parallel courses" suggested itself; and in many Western Colleges this device has developed the system of the various so-called "Colleges"—departments of one large institution, whose concurrent courses all lead to degrees, while the degrees themselves have different names, according as the courses have more or less of the traditional character of the classical course in them. But this system of parallel courses, with or without differently named degrees at the end of the courses, could not suffice, in the larger institutions, to meet all the needs of the new situation. Such organization of natural history work as Agassiz initiated at Cambridge, demanded room for a higher

sort of instruction. Other departments could not remain behind where natural science led. And thus it was that the call for what used to be called "post-graduate" study became general. And so, once more the "materialistic" interests, in getting a hearing for themselves, brought to pass the beginning of a revolutionary change. Those whom the Columbia committee accused of thinking only of the "body," began a process that is now transforming with the highest purpose the training of the soul. Such was the origin of the modern American University.

II.

A FRIEND and colleague of mine has given me a look into an interesting note-book of his own, written out in the first year of his graduate life, and, as it chances, in the first year of President Eliot's administration at Harvard. The notes are an evidence of the state of "post-graduate" work at Cambridge in the academic year 1869-70. A series of "philosophical lectures" was then offered to graduates, and formed, I believe, the first course of formal graduate instruction in metaphysical topics at Harvard. The lecturers were Professor Bowen, Mr. John Fiske, Mr. Charles Peirce, Mr. Cabot, Dr. Hedge, and—last and greatest name—Emerson. The lecturers followed in series, filling the winter with what constituted one long course. Examinations were held upon all the courses but Emerson's. The whole series, as represented by my friend's note-book, is a decidedly impressive one. Mr. Fiske's lectures, on "Positivism," afterward took shape in the "Cosmic Philosophy." Professor Bowen's and Dr. Hedge's contributions to

the work were also substantially repeated in later publications. Mr. Cabot, now Emerson's biographer, broke on this occasion a silence that he has in general maintained far too rigidly. Emerson himself read those papers on the "Natural History of the Intellect" which have since been seen, in the original manuscript or in copy, by a few students, but which have so far not been published—papers in which, as he said, he was "watching the stream of thought, running along the banks a little way, but only seeing a little, knowing that the stream is hollowing out its own bed." Mr. Charles Peirce, on the contrary, expounded, in the highly technical form that he has since so much developed, that "Algebra of Logic" whereof he is still easily the first master among us in this country. Stronger and more interesting contrasts in thought and method could hardly have been presented to young graduates of philosophical ambitions. The courses, however, were regularly attended, I believe, by three students. Such was one beginning of a department of University instruction.

By this same year, however, the custom of offering some sort of "post-graduate" work, however little it might be in amount, was comparatively common throughout our country wherever there were ambitious teachers. Columbia College had taken definite action looking to the establishment of "University courses" as early as 1857, four years after the time of the report above referred to. As the organization of the higher work in science by Agassiz at Cambridge suggests, scientific specialties were from the first generally well in advance of the literary branches. Where laboratories and museums existed, graduate instruction was

often a matter not only of choice, but of necessity. On the other hand, the unformed state of graduate instruction in other departments as late as 1870, is well suggested by the lectureship course in metaphysics at Cambridge, as above described. Everywhere graduate instruction suffered from the fact that, except in immediate connection with museums and similar enterprises, where research was a necessary adjunct of administration, courses for graduates were still of necessity looked upon so far as merely supplementary tasks. Either lecturers from without must be summoned, or else the time of already very busy college instructors must be taken for tasks which they might indeed love very much, but which seemed in conflict with their duties as disciplinarians, who were to "perfect" by an established system of "culture" the minds of undergraduates.

Nevertheless, as a recent report of the President of Yale University (that for 1889) points out, there were already in those early days symptoms at New Haven, as there were elsewhere, of a strong drift toward something better. As early as 1871, the movement at New Haven "for the securing of what is called the Woolsey fund" was, according to this report, an expression of the appreciation of the "need of the central or University life in our institution, which was then beginning to show itself." Similar movements in various places in those years show the same tendency. The real need, however, was for a change of the general policy, such as should tend toward much more than the mere offering of supplementary "post-graduate courses." As the President of Yale says, in the report just cited, "We look backward to a time which

is within the remembrance of the older officers of instruction and many graduates, and we see very little of this which we may call the central or common life"—*i. e.*, of organized University management as such. "The several departments," that is, the college and the various schools, "moved along their own way, and in a large measure independently of one another. They accomplished their work, each one of them by and for itself . . . But within the last quarter of a century the University life has come into being, and it has brought its peculiar demands with itself." And the University thus began at New Haven to ask for special funds for its own peculiar tasks, and to seek a higher organization. A similar growth of a general desire for the coming transformation of the College into the University dates in Cambridge from the early years of President Eliot's administration. "Post-graduate" instruction, regarded as a merely supplementary matter, was thus but a small part of the needed undertaking. It was not enough to offer opportunities. They must be united, brought into close relation to one another, knit together by organic ties. The professional schools, which had long flourished side by side with the colleges, must be drawn into closer co-operation with one another, and with the new ideals. The graduate department itself must find instructors, laboratories, and libraries, adapted to its needs. Funds at all sufficient for such tasks were in the early seventies not forthcoming, either at New Haven or at Cambridge; and the ideals of University life were still necessarily very vague everywhere in our country.

It was in those days, however, that the rapidly

growing interest in higher learning among our academic youth found vent in a positively passionate enthusiasm for the methods and the opportunities of the German Universities. Still it is the case, and long will it remain so, that a longer or shorter course of work abroad will be an ideal for the American student. But in those days there was a generation that dreamed of nothing but the German University. England one passed by. It was understood not to be scholarly enough. France, too, was then neglected. German scholarship was our master and our guide. In 1877, at the new Johns Hopkins University, in Baltimore, I heard Professor Sylvester say that when he dealt with young American scholars he found them feeling as if not England, but Germany, were their mother-country. The admirable hospitality of the German University toward the foreign student fostered this enthusiasm. A little travel and expense, a little necessary pains with the language—and then the American student found himself able to come into immediate contact, as it were, with the great minds of the German world of scholarship. Lotze, or Helmholtz, or Mommsen, was his master. He could hear and read his fill, in a world of academic industry, and amidst elsewhere unheard of treasures of books. The air was full of suggestion. To one who personally knew nothing of the rigid studious discipline of the German gymnasiast, through which the native German had passed, there was little in the freedom of the German University to remind him of the old and narrow “disciplinary” ideals of his home. The quality of study seemed no longer “strained.” The air of it seemed one of absolute blessing and power. One

went to Germany still a doubter as to the possibility of the theoretic life ; one returned an idealist, devoted for the time to pure learning for learning's sake, determined to contribute his *Scherflein* to the massive store of human knowledge, burning for a chance to help to build the American University.

Some sort of study abroad was indeed an ideal with our best students very long ago ; and, as I have said, it still remains an ideal. But this enthusiasm for the German University reached its flood in the seventies. When, nowadays, I receive letters from our students abroad, I do not find their ardor so hot, their gratitude to Germany so enthusiastic, as it seems to me that our own used to be in the generation of young graduates to which I chanced to belong. One has opportunities on both sides of the water now ; and one looks to other countries also, as well as to Germany. No doubt academic enthusiasm is all the while broadening. But the intensity of its one highest purpose of those days—to study in Germany—has somewhat diminished.

It was upon this well-prepared basis that the Johns Hopkins University began its epoch-marking work. The present writer enjoyed the kindly privilege of being one of its first company of twenty Fellows (graduate students receiving a stipend) in the years from 1876 to 1878. Here at last, so we felt, the American University had been founded. The academic life was now to exist for its own sake. The "conflict" between "classical" and "scientific" education was henceforth to be without significance for the graduate student. And the graduate student was to be, so we told ourselves, the real student. The undergraduate

was not yet quite clear of the shell ; but the graduate could imagine itself to have grown at least his pinfeathers. The beginning of the Johns Hopkins University was a dawn wherein " 't was bliss to be alive." Freedom and wise counsel one enjoyed together. The air was full of rumors of noteworthy work done by the older men of the place, and of hopes that one might find a way to get a little working-power one's self. There was no longer the dread upon one lest a certain exercise should not be well written, or a certain set examination not passed. No, the academic business was something much more noble and serious than such "discipline" had been in its time. The University wanted its children to be, if possible, not merely well-informed, but productive. She preached to them the gospel of learning for wisdom's sake, and of acquisition for the sake of fruitfulness. One longed to be a doer of the word, and not a hearer only, a creator of his own infinitesimal fraction of a product, bound in God's name to produce it when the time came. In all this, as one may be sure, a raw youth might indeed find temptations to hasty efforts at "original work," and some of us doubtless found them. And then again, the true academic freedom is a thing hard to acquire. With a great price one attains this liberty. Some of us did attain it only slowly. Graduate study, and halting efforts to produce this or that for one's self, involved one easily in controversy ; exposed one to sharp criticism ; and it is hard to learn how to bear criticism, even of the sharp sort, without feeling personally wounded ; to hear that one's work is so far a failure, without imagining the statement a reflection upon one's moral character.

The ideal of the truly academic person is of one who can criticise and be criticised, as to scholarly work done, wholly without mercy as to the scholarship that is in question, wholly without malice toward the person of his opponent. Among the little company at the John Hopkins University there was in general the best of friendly feeling ; but I remember some signs and experiences of sensitiveness that indicated how slowly the purely academic traditions formed in our minds—and how much they were needed by us all. And I mention the matter here because it suggests one of the most important offices that a University has to fulfil, that of teaching its scholars, and through them the general public, how to bear without malice and without rebellion, the plainest of parliamentary speech in matters that concern the truth. Only the academic life can teach a nation the true freedom of enlightened controversy.

There used to be a tale, doubtless mythical, current among us at Baltimore, concerning one of our number, a certain X, a decidedly young man, who, according to this tale, had expressed opinions, on a particular matter of scholarship, such as did not meet the approval of his academic senior, a very popular professor, N. Hereupon, as it chanced, N very pleasantly announced his intention of reading, before a University Society (composed of specialists) a paper refuting the expressed views of X. The latter, as very decidedly the junior, was at once elated and terrified by his novel situation. Just before the meeting where the paper was to be read, N, who was the soul of hospitality, and who invited us young men often to his table, approached X, and, in his accustomed informal

fashion, asked the latter to dine with him on the following Sunday. "Sir," replied the proud and blushing young scholar, in a tone of great self-control and earnestness, "I shall be delighted to dine with you, in case, at the conclusion of the controversy to-day, I find that we are still upon terms of cordial friendship."

Yes, the University spirit was in more ways than one a hard thing to acquire! The life of learning that was to be more than mere "discipline;" of love for truth that was to be also a love for seeking new truth; the life of academic freedom that was to involve at once the most loyal mutual friendliness of scholars, and the sternest justice toward all lapses in scholarship—this was still a somewhat new thing, after all, in America. I do not imagine that Baltimore had in those days any monopoly in the pursuit of this spirit. I know that it had not. But I speak of the hopes that used to bloom in those first days in Baltimore, because, after all, they must have been fairly typical; and if I have ventured for the moment upon what seems mere gossip, it is because I have fancied that it has some suggestions about it of the nature of the genuine academic ideal.

III.

I SUPPOSE that there can be no doubt of the great influence of the Johns Hopkins University upon what has happened since. The growth of the University spirit was in any case a matter foreordained; but the popular prominence not unjustly given to the admirable Baltimore enterprise has affected the remotest corners of the land. The endowment and beginning of three highly noteworthy Universities within the last

few years, all of them with programmes of an ambitious character, and with ideals of a nobly academic elevation, has shown how much the public interest has now been aroused. These three institutions, Clark University at Worcester, the new University to be begun at Chicago, the Stanford University in California, are all of them indeed only buckling on the armor which, as one may warmly hope, they will never be obliged to take off. But if good resolutions are not everything, we are none of us yet free from the necessity of making our good resolutions go a great way toward determining our academic standing. The American University is still in its storm and stress period. The rapidity of its changes is often almost appalling. Yet one has every reason to believe that these changes are, for the most part, healthy.

If one asks for signs that the new movement is not a forced or an artificial one, the strongest sort of evidence is suggested by such experience as that of the last few years at Cambridge, in respect to our relations to the country at large. The philosophical department, in which I am a teacher, surely stands for something that one might call, in this "materialistic" age and country, an academic luxury, if any department deserved such a name at all. When I began to teach at Cambridge, nine years ago, philosophy still seemed to be generally regarded as such a mere luxury, at least outside of Cambridge. If ambitious students consulted one as to their chances of getting employment somewhere as teachers of philosophy, in case they should continue their academic studies with that intent, one had to tell them that the chances were poor. One had rather to discourage their ambition. Within these few years,

how much the scene has changed! Now we hear with comparative frequency of new and still vacant places for which our advanced students have an opportunity to apply; and ambitious students of philosophy no longer timidly ask advice, but courageously demand an opportunity for advanced work, and often come from a great distance, from the Provinces, from the South, from California, to get it. Other departments have had similar experiences. The increase of the numbers, of the hopefulness, and of the academic ambitions of graduate students here at Cambridge is, however, in no wise an exceptional fact. The President of Yale makes mention of a similar increase in all his recent reports. In 1886-87, Yale University had fifty-six graduate students, in the following year sixty-nine; in 1888-89, eighty-one students, and at the beginning in 1890-91, one hundred and four, of whom "one-half of the whole body," as President Dwight tells us, are from other institutions of learning. Our own catalogue at Cambridge shows this year one hundred and ten resident students in the Graduate School, of whom a goodly proportion are from other institutions. Nearly all these persons aim to make teaching a part of their future career. Many of them hope with just confidence for high academic success.

The changes of organization and administration that in several of the old institutions have accompanied this increasing interest in higher graduate work, are too minute and complex in their details to admit of any fair discussion here. The most noteworthy transformation that has attracted public attention seems to be the reorganization at Columbia, attendant upon the new administration of President Low. Of this Presi-

dent Low's own Report, of October, 1890, gives us a full general account. The matter is one of representative interest. Up to the time of the change, as President Low tells us, the various "schools" at Columbia, including the Collegiate department proper, with its supplementary graduate courses, the "School of Political Science," and the Schools of Law and Mines, had each "its own faculty; and each school was administered without any reference to the others, almost without any consciousness of the others." In consequence, the true University spirit was of necessity lacking to the organization. Individual instructors might possess such a spirit or not. Yet "the attitude of the institution toward the student was one of multiplied opportunities, but opportunities held more or less out of relation to each other." The reorganization has been, then, first of all a unification under the influence of University ideals. One who has had any opportunity to learn of the progress of the discussion at Columbia which terminated in the reorganization, must observe with satisfaction how, despite considerable doubt and opposition, the University ideal finally triumphed, and that too at a moment almost precisely contemporaneous with an academic reorganization with us at Cambridge—a change much more limited in extent than the one at Columbia, but inspired by the same general ideals. What is common to our recent changes and to those at Columbia is, that they aim finally to free the Graduate department from its old bondage to the ideals and the paramount influence of the collegiate course, and to make it all the sooner what in time it is sure to become—the most important department in the University.

I have thus spoken of two characteristic recent movements: that toward the direct enlargement of the Graduate departments of our Universities, and that toward such a reorganization of the University life as shall put these departments obviously and prominently where they ought to be—at the head. Cornell University, which has also been prominent in the foregoing movements, has just given us a striking illustration of another and *third* tendency, whereof we can all of us show some examples, although few indeed among these examples could rival this of Cornell's. This tendency is one of the most important of all.

The University, as we have now seen, grows toward oneness of life, which is its great glory. It grows, too, toward academic freedom, which means the subordination of so-called "disciplinary" ends to the true goal of scholarship (namely, the advance of human learning). It also grows toward what one might call cephalization (whereby I mean the setting of the highest work prominently at the head, and the making of graduate instruction not a supplementary, but a paramount thing). But now, while all this goes on, the organism that is thus unifying as a whole, is at the same time sharply differentiating in its parts. If any tendency besides the two heretofore illustrated is characteristic of recent years among us, it is the high development and the clear distinction of the various "departments" in the strict academic sense of the word—such departments, I mean, as that of history or of philosophy. The cultivation and encouragement of original work by advanced students, the growth of laboratory and of "seminary" methods of

doing such work, or of getting ready to do it, the academic interest in "specialties," the needs of well-defined elective courses for higher degrees—all these things have tended to force the various departments into a relatively distinct and independently self-conscious life, such as the old days of the collegiate course never knew. In historical instruction—as was shown by the elaborate government report on "Instruction in History in American Universities," prepared not long since by Dr. Herbert Adams, of Baltimore—the organization of departmental work has been for a number of years very progressive and elaborate. In the natural sciences also, which in this, as in so many other matters of University life, took the initiative, laboratories and museums have long since been natural centres of departmental organization. But in the other departments organization has grown in a very unequal fashion. Nowadays, however, the constant tendency is toward equality of organization in all directions. The department of philosophy, owing to the varieties of opinion and method prevalent among its teachers, seems an especially hard one to organize on a large scale, and still with a due respect for the freedom of teaching. However, we ourselves have tried to solve the problem at Cambridge, with six instructors in the department, and a considerable variety of opinions represented. And now appears the announcement of the "Susan Linn Sage School of Philosophy" at Cornell University, with eight teachers, with a *Journal of Philosophy*, with courses covering both undergraduate and professional work up to a decidedly high grade, and with attention given to the History of Philosophy, to Phil-

osophical Theory, to Ethics, to Psychology, and to Pedagogy. And thus the cheerful emulation in well-doing goes on. By this step, meanwhile, Cornell gives the most brilliant illustration, easily possible, of the whole departmental tendency of the time.

To these three noteworthy tendencies of recent academic life must be added as fourth a constant increase in the number of University publications—journals of special science, monographs, and minor contributions to advancing knowledge. To the importance of this function of the modern University a separate paper would be needed to do justice. And this function is still in its infancy.

Fifth and finally, as a significant but still problematic tendency, indicated by more than one recent discussion, one may mention a disposition to re-examine the basis upon which the traditional degrees have been given. The proposed shortening of the course for the Bachelor's degree—the "Three-Years Course" (so-called) which the Harvard Faculty devised a year since, and which the Overseers have now set aside, was no entire anomaly among recent proposals, but only a suggestion of one fashion at least in which, in future, the development of the University in its wholeness is likely to react upon undergraduate life, namely, by altering for general and organic reasons the somewhat arbitrary lines of classification that tradition has adopted. The growth of the elective system at Cambridge is already an expression of this reaction of the developing University spirit upon the traditional college course. The permission of the substitutes for one ancient language in the admission requirements, is another instance of the same sort. The new plan

was merely an effort to alter, mainly in the interests of the higher academic work, the conventional boundaries that separate the undergraduate from his more advanced brother. In its form as adopted by the Faculty, this plan now belongs to "ancient history." But similar alterations of classification are sure to be offered in the future, and, in one form or another, to succeed.

IV.

SUCH are some of the tendencies of the University life of to-day in this country. To sum it all up, desires that were often called by their enemies merely "materialistic" and "popular," mere cravings for the basely "practical;" and studies that were often rather unwisely praised by their admirers as being solely devoted to "things," and not at all, like literary studies, to "words:" these began to affect the American College of the second quarter of the century. The stimulus of these new interests broadened and intensified our national life, reacted advantageously upon literary study itself, sent our young men abroad for guidance, and at length prepared us to try in earnest for a higher University life of our own. This new life is just now in the midst of a most rapid growth, in which a large number of institutions share. Noteworthy is throughout the fact that the modern University does not tend to be either "materialistic," or merely "practical," but is daily growing more idealistic, more a cultivator of pure and noble theory, more devoted to truth for its own sake. No department is just now prospering with a more rapid progress in attracting students than is the department of philosophical study, notoriously

the least "practical" of all. And yet, in all this, the modern University is not losing its hold upon the life of the nation. The old College was indeed a thing apart. The new University, with all its high devotion to theory, is yet, in a deeper sense, wisely near to the people, and is on the whole, as numerous generous endowments show, most cordially supported by them. Its labors, although in the highest degree theoretical, are losing more and more the false abstraction which has been too often characteristic of the learned. The modern University study of Political Science is educating the public for that serious time of grave social dangers which seems to be not far off. Academic work in Natural Science is constantly opening new fields to the industrial arts, and giving new insights into the business of life. Academic study of Philosophy is preparing the way for a needed spiritual guidance in the religious crisis which is rapidly becoming so serious. All these matters are of the office of the University. They were *not*, in former days, a prominent part of the work of the College.

If, in view of all this growth, one still asks, What is the Ideal of the modern University? then I venture to answer: The traditional college had as its chosen office the training of individual minds. The modern University has as its highest business, to which all else is subordinate, the organization and the advance of Learning. Not that the individual minds are now neglected. They are wisely regarded as the servants of the one great cause. But the real mind which the University has to train, is the mind of the nation, that concrete social mind whereof we are all ministers and instruments. The daily business of the Univers-

ity is therefore, first of all, the creation and the advance of learning, as the means whereby the national mind can be trained.

But perhaps some reader may still ask the question : What, in all this growth of higher University life, is to become of the undergraduate? Will he not be made too subordinate a being, in view of these lofty ideals of the University? As a matter of fact, the great numbers and the large significance of the undergraduates, in every university, insure and always will insure the closest attention to their needs and interests, however much the ideal of the University grows upon us, however lofty the more organic and national purposes of our academic work become. Of undergraduates and their specific wants, of the relative merits of "disciplinary" and "elective" courses, this paper has not to speak. Yet of the proper place of the undergraduate in the organism of a great University I have a pretty decided notion, which I should like to express as I close. It is this: In the true University the undergraduate ought to feel himself a novice in an order of learned servants of the ideal—a novice who, if in turn he be found willing and worthy, may be admitted, after his first degree, to the toils and privileges of this order as a graduate or, still later, as a teacher; but who, on the other hand, if, as will most frequently happen, he is not for this calling, will be sent back to the world, enriched by his undergraduate years of intercourse with his fellows, and with elder men, and progressive scholars. The ideal academic life then is *not* organized expressly for him. And yet he will gain by the very fact that it *is* organized for higher aims and upon more significant principles than his in-

dividual interests directly involve. It is a mistake to think *first* of "disciplining" the undergraduate mind, and *then* of higher academic purposes. First let us seek the highest, which is organized scholarship. Then let us give ample time, teachers, and oversight to the undergraduates, but let what we do for them be informed by the true University spirit; that is, let us treat them just *as* novices preparing to enter the higher scholarly life in some one of the multitudinous departments of modern research, and let us train them *as if they were* all known to be worthy of such a calling. Most of them will not be worthy, and will return ere long to the outer world, or else, in the more "practical" of the learned professions will keep nearer to the world of research, but will not dwell in it. To such we shall have given our best if we have regarded them for the time as possible future colleagues, as beginners in constructive wisdom, and have tried to give them our best ideals as to how one labors when one is a scholar. For what is scholarship but spiritual construction. And what better "discipline" can a mind get than the contagion of the enthusiasm for serious, toilsome, and spiritual constructiveness, as he may get it in three or four years hard work under wise masters in any of the liberal Arts and Sciences?

VI.

AESTHETIC PHYSICAL CULTURE.

BY C. WESLEY EMERSON, M. D., LL. D., PRESIDENT OF THE
EMERSON SCHOOL OF ORATORY, BOSTON, MASS.

In the education of the body, there are three guiding ideals.

One ideal is to educate the body according to the fashion of manual labor. This, I think, is the prevailing idea. It is said by some of the advocates of this ideal, that the exercises for physical culture should resemble, as far as possible, the movements in manual labor. They believe that this method is the shortest road to health and strength.

A second class advocate physical culture from the military stand-point, believing that the physical education derived from military drill is the most certain method of developing health and strength.

I view physical culture from a stand-point, not antagonistic to these, but entirely different. It is psycho-physical culture that I advocate and teach, as all who have seen my work on that subject well know. Psycho-physical culture can be very properly classed under the head of aesthetic physical culture, and my treatment of the subject to-day will be under that head. In a word, I hold this doctrine, that to educate the body according to the same principles by which the mind should be educated, or in other words to

educate the body to express the psychological divisions of the mind, is the surest way to develop the highest degree of *health* and *strength* and *suppleness* and *power* and *endurance* and *beauty*. The results of ten years' teaching this system of physical culture has demonstrated beyond question to all who are acquainted with the work, that it is adapted to all classes and ages and is unequalled in producing the conditions I have named.

In this short paper, it is impossible to set forth the teaching in detail. Therefore, I shall not attempt it, but simply endeavor to suggest some of the principles which underlie this system, the object of which is to invite the laws which govern the healthy and cultured mind out through the body, resting the philosophy upon the idea that the highest use of the body must result in health and strength; and the object of the highest use of the body is to express and obey consciousness, intelligence, and will. Allow me to state this idea in a little different language. The principle that underlies this entire method of physical culture is that of inviting the consciousness, intelligence, and will out through the body, by a system of exercises adapted to that end.

Beauty is the unmistakable sign of health. Rev. William R. Alger says: "Beauty is the sign of fitness for function." This is an excellent definition.

We do not mean by this, that those persons who are called handsome are always healthy; but we do mean that that treatment of the body which develops beauty insures health, and conversely that treatment which produces ugliness tends to weakness and disease.

I doubt if there is any other kind of stimulus that

will cause a youth to practise methods of physical culture so persistently and faithfully, as the desire to grow beautiful; and the first thing in any system of education, and that which "puzzles the will" of the teacher most, is to make such an appeal to the pupil as will create an interest in and a love for the subject taught. When the enthusiasm of the student is fairly kindled, he is well advanced in the path of scholarship.

The first law to be obeyed in aesthetic physical culture is *symmetry*.

The natural form of the human body appeals to and satisfies the aesthetic sense more perfectly than any other object in nature; and correspondingly where there is a great lack of symmetry, the aesthetic feelings are shocked.

How are we to know whether a person is symmetrical or not, is a question asked by some; and it is urged that we have as yet no criterion by which to judge of symmetry from the fact that few, if any, human beings are symmetrical. Yet the very persons, who raise this doubt in the abstract, when judging of the concrete are as ready to decide the question as are any others. They unhesitatingly pronounce some persons of "good forms," others of "bad forms." They cannot help judging, for the inner sense of the perfect impels them to do so.

"No one," it is said, "ever saw a perfect human form; therefore, no one can tell what a perfect form is." No one ever saw a perfect tree or a perfect spear of grass, and yet all will agree that such grass and such trees lack this or that essential.

How comes it that we possess this belief in the perfect? It comes from the fact that the soul, having

seen a suggestion of the perfect, completes in its own mental concept the full orbéd ideal, and that concept becomes a fixed criterion.

In sculpture, the Greek master-pieces are pronounced the most natural and beautiful. And not by the few is this decision made. All people in all parts of the world and in all ages agree in this judgment.

The mind recognizes beauty when it sees it; also, symmetry which is an essential element of beauty. Men differ in their purely intellectual opinions; but, when the realm of ideality is entered, a common ground of agreement is at once established.

It is ideality, or to use another word intuition, that determines what a beautiful manifestation is. In the intellectual analysis of the impression of beauty, there may be disagreement and often is; but even here there is a very general agreement, so general at least as to establish a philosophy of beauty to which the great body of students in aesthetics subscribe.

Another law to be obeyed in aesthetic physical culture is *unity*.

What is unity? *Unity is the whole expressed in each and every one of its parts.* Unity is the criterion of beauty. Art delights us only in the ratio that the artist obeys this law.

In the Greek statue, there is a line of continuity throughout each part, associating it with every other part, so that all confirm each. In the best of the Greek statues, the spirit which the artist intended to reveal is manifested in every part of the figure, so that each part repeats according to its own form and individuality what every other part expresses. The more perfect the unity, the more perfect the illusion of life,

until the beholder is moved to say: "That statue speaks."

To *develop unity* in the *human body* the *entire freedom of every part should be cultivated*, so that no abnormal restraints in any of the muscles can exist to prevent their spontaneous and responsive movements. This end is accomplished by giving uniformity to the development of the muscles, care being taken to develop no one at the expense of others.

Next, the law of *equilibrium* may be mentioned as commanding special attention,—that is, the relation which every part sustains to the law of gravitation.

One can never step out of the hand of gravitation; it is working for or against him all the time. If he works with it, it works for him with infinite force; if he works against it, it crushes him as if it were an iron hand of fate. Perfect obedience to the law of gravitation brings equilibrium, secures infinite reinforcement and a suggestion of power and self-command.

Equilibrium stands for strength. A braced and constrained position suggests weakness.

I teach aesthetic physical culture as I have arranged it in my published works, which is according to the following method:

1. *The whole.*
2. *The parts of the given whole.*
3. *The relation of the parts to the given whole.*
4. *The relation which exists between the parts, or in other words the relation of the parts to one another.*

First, then, we consider the exercises which are for the purpose of developing what is called *presence*.

The power of a good presence is limitless, for it seems to stand for what the person is.

What is termed presence cannot well be defined, and certainly it cannot be fully analysed. Therefore, writers and speakers have contented themselves with using the one word presence. Poets have given descriptions of the appearance and bearing of persons, in a way to suggest to the imagination of the reader something of the power of personal presence. Perhaps the most effective of all these poetic descriptions is the one given of Achilles by Homer. The great Hector was not conquered by Grecian arms, but by the commanding presence of one man.

Much that constitutes presence comes from the mental and moral life within; in fact, all comes from the fountain of spirit. The body is only the window, through which the spirit looks. Therefore, a person can look no greater than he is, while it is quite possible and very common for him to look inferior to what he really is; for the window through which the soul reveals itself is frequently dimmed by lack of proper care.

The body seldom reveals a great soul; because the latter is educated, refined, and developed by culture, while the former is stunted for want of education.

The body should be educated from the soul side,— that is, educated from within outward, expressively rather than mechanically. A perfect line of correspondence should be developed between the inner states of being and their physical manifestations.

The body should be looked upon as a natural manifestation of the soul, and educated according to that

principle, and not trained as a machine merely; for, while it involves mechanical principles in its structure, it is vastly more than that, being as it is the outward medium of the mind. Through the body the soul communicates its activities to all without itself. The education of the body should be in obedience to the same principles by which the mind is educated.

In developing presence, the first principle that should be obeyed is symmetry. The mind that is not educated symmetrically is, though perhaps strong in parts, weak in effectiveness.

Second, elevation of all the parts is sought, thereby giving the expression of an intellectual being as distinguished from the animal. The attitude of the brute always suggests that he is governed by the beastly sensations and instincts, and not by intellectual aspirations. Though the mind may be highly cultivated, the body of man, if not educated according to the laws of mental correspondence, stands and moves too much as the brute does.

Freedom of the will, or the power to choose, is a special psychological quality of human nature. This power is manifest in the body by its appearance of being able to act without constraint.

Poise is also included in this division, termed the whole. Habitual poise comes from taking such advantage of the specific law of gravity as to stand by its aid, rather than by some defiant energy of the body. It corresponds to the guiding power of the will in its relation to the universal. When a man's will is directed to private and selfish ends, it is weak and can be easily turned; but when directed to universal ends, "it can be neither bought nor bent." It is as fixed

as elemental nature. Correspondingly, when the body is out of poise, it shows weakness of position, and apparently maintains its attitude by great effort; while if the poise is perfect, the aesthetic effect is that of great repose and certainty.

The second group of exercises is for the purpose of educating the *parts* of the physical person, defining and developing the *articulations* in obedience to the laws of the normal activities of the parts.

In educating the mind, it is not considered merely as a whole, but with regard to its many faculties, perception, memory, judgment, reason, will, imagination, etc. So, the education of the body should be carried through all its individualized parts. The body appeals to the aesthetic feelings, through the separation of the parts, by clearly defined articulations; and the greater the number of the articulations, other things being equal, the greater the attractiveness.

In the movement for defining and freeing the parts, the strictest economy must be maintained. All effort, not absolutely necessary to the accomplishment of the exercises, must be avoided. In the undisciplined mind, much more effort is used in thinking than is necessary, which is manifested in the speech and writings. So, in the uneducated body, much more effort is apparent in moving than is necessary. Much of what is termed awkwardness is caused by employing one part of the body to assist in moving another part, when it is impossible for the part so employed to render any such assistance. All such extra and futile effort but embarrasses the movement and exhausts the forces of the system.

The next division of exercises may fittingly be

termed exercises for developing the relation of the parts to the whole. I mean by this exercises for the purpose of bringing each part into the proper service of the whole.

In the uneducated mind, the different faculties sometimes act quite powerfully and yet do not suitably serve the individual. The memory often acts unbidden and in a certain sense automatically; yet it often fails to respond to the will of its possessor. The result of education, so far as the memory is concerned, is not confined to strengthening it for containing more facts. This indeed is one of the smallest benefits to be gained. The chief advantage is realized in calling the wandering memory into service, so that it will present its contents when asked for. That which can be said of the memory can as truly be affirmed of all the other intellectual faculties. Undisciplined intellects reason profoundly at times; but their reasoning is of little use to the possessors, because they will not serve when required to do so. How barren the mind is sometimes, when one wishes it to act. How fruitful at other times, when repose is most desired.

The education of the mind then includes, not only the strengthening of each and every faculty, but the bringing of the activity of every mental function under the control of the will.

In aesthetic physical culture, the same objects are sought as in mental culture. The education of the physical parts in relation to the whole consists in cultivating each part to serve in its own sphere the whole physical person. This is accomplished: *a*, by directing the central attitude of the person to the point toward which the part is to be moved; *b*, by economi-

cal movement of the part in the line intended; *c*, by the greatest possible energy put into the part, thereby using all its strength without showing effort; *d*, by yielding all the other parts into conformity with the one that is thus so powerfully exercised.

If the physical person is thus divided into parts, what stands for the whole which the parts are supposed to serve? This is a legitimate question and one we are glad to answer, because it will throw light upon the whole subject of aesthetic physical culture.

Certain parts of the body represent certain qualities or attributes of the soul. Not because any one has arbitrarily determined it should be so, but the perception of this law is intuitive. For illustration: All persons in every part of the world, when making a motion referring to themselves, always point to their chests. The chest represents to the intuition the entire person. The parts should always appear to serve the chest. The chest represents the moral nature. This is illustrated in all literature; for it is ever the heart that is referred to as representing, in the strongest figure of speech, the moral convictions and deepest affections.

The fourth and last division of exercises is for the purpose of cultivating the parts in relation to one another. From this education comes all the highest skill of the body. That physical characteristic which most clearly and universally distinguishes man from the brute creation is the adjustment of the parts of his person in relation to one another. For example, each finger of the human hand is so definitely related to the thumb, that one is capable of touching the inside of each fin-

ger to the inside of the thumb. This can be done by no animal below man.

When we observe the intellectual action of the human mind as compared with the instinct of the brute, the same law of the relation of the parts to one another is still more clearly and wonderfully manifested. It is not merely the strength of the mental faculties, with their obedience to the will, that gives the highest mental power, but the coördination of the mental faculties.

What is that imagination which in Shakespeare compassed all regions, reached all heights, and sounded all depths of the soul, but the fine relationship of all the faculties of the mind carried to the highest degree of perfection yet known? The imagination is not a separate faculty in any sense whatever. It is the result of the action of the different faculties of the mind in relation to one another. Out of this high relationship are born new creations, such as appear frequently in the marvellous mental births of the great Greek and of the still diviner English bard.

Not alone is the poet the manifestation of this high relationship, but of it is born every kind of genius. This relationship of the different parts of the body, as we have already seen, is natural and is more and more manifest as the scale of being rises. Out of the development of the relationship of different parts of the body come beauty and grace of form and movement.

At the time the exercises of the fourth division are begun, the forces of the system are in a high state of activity: the heart is beating rapidly, and the lungs are correspondingly working with great speed, so that respiration is rapid, as one would quickly realize, if he

should attempt to read aloud or speak for any length of time, at the close of the third division of exercises. The entire arterial system is pulsating in a way to send the blood through the lungs very swiftly.

If one should stop all exercise suddenly, at the close of this third division, the legitimate benefit would not be realized. One would not only fail to reap profitable results, but might seriously apprehend positive injury from violating *the law of rhythm in nature*. If a violent exercise is begun suddenly, the danger is great; and it is equally great, if ended suddenly. There are records of positive injury, and not a few cases of sudden death, caused by such exercises.

One might naturally ask, if it would not be better to avoid vigorous exercise altogether. The proper and simplest answer to this question is, that the structure of the human system provides for such exercise, and therefore it ought to be taken. Without it, reserved power could not be stored up in the organism. Science has so abundantly demonstrated this truth that all doubts are removed from the minds of those who have given the subject any serious study.

But while vigorous exercise must be taken, it is equally necessary that suitable exercises for *harmonizing the force thus generated* should be practised also. The exercises described in this fourth division are for the purpose of meeting that requirement. By them, the dynamic force, which has been developed by the vigorous exercises, is transmuted into harmony of action, which is as needful to the perpetuity of all organisms as is dynamic force itself. One of the most wonderful principles of all nature's organisms and systems, is the perfect harmony with

which they move. This is observable all through the planetary systems and up through the vegetable and animal organisms.

Harmony is a positive energy and not a negative quality. This is why I have said that the dynamic force developed by vigorous exercises must be transmuted into harmony. The object is not to "slow down,"—*i. e.*, to reduce a force in the body,—but to transmute it into something abiding.

If you allow vigorous exercise to become less and less vigorous, until the forces of the body are quiet, as they were previous to taking the exercise, reaction and prostration follow. The effect of exercises taken in this manner tends toward weakness, rather than to strength. It is similar to the reaction consequent upon taking alcoholic or narcotic stimulants, except for the lingering poison of these stimulants.

An immediate and entire change of exercises is required in the form of *harmonizing movements*, which are found in the fourth division. A hint of this principle may be found in Homer's writings, where he describes the Greek warriors as entering upon athletic games when the battles with the Trojans are suspended but for a day. One might think that, after such bloody conflicts, they would rest; but they knew too much for that, even at so early a period of their history. The Greek generals would not suffer such an enervating and demoralizing influence to be exerted, in view of the anticipated struggles of succeeding days.

By the exercises of the fourth division, the nervous system is refreshed and invigorated. The nerves furnish the natural stimulant for muscular activity, and this stimulant is acting upon the muscles

at the close of the severe exercises of the third division and should now be returned through a higher order of exercises,—that is, a semi-psychological form,—to the brain that furnished it. The brain and nerves constitute the battery for all energy, whether physical or mental. The brain possesses two classes of centres, the vital and the mental. The energy of the former is conveyed through the mechanism of the entire body to the latter.

All the exercises of this division are given in the definite movements which express through the body the healthy attitudes of the mind. By this method, the health of the mind is transmuted into health of body. I simply introduce the thought here for the purpose of suggesting the value of applying to physical culture some most important discoveries in nature; viz., the *correlation of forces and conservation of energy*. In the kingdom of nature, no energy is ever lost and it never ceases to operate. When it seems otherwise, it is because it is transmuted into some other mode of motion.

If we would derive the highest benefit from physical culture, we must have some definite method of conserving force, when it is developed. No other system of physical culture, as far as my knowledge extends, has made obedience to this principle one of its chief corner-stones. In fact, no one has definitely mentioned it. Some have arranged to gradually increase the vigor of the exercise they give and then to gradually decrease it to the point of rest. This practice is good as far as it goes, but it does not meet this demand revealed in the correlation of forces and the conservation of energy.

In this demand the requirement is not to work faster and then slower, but, through a different exercise, to transmute a force developed by vigorous exercise back to the brain and nerve centres, to be stored up in healthier nerve tissue. It is easy to develop and waste power, but it is not an easy matter to conserve it. Yet I am satisfied that there is a way, and that the way is to *transmute pure physical energy into psychological force*, not in some accidental or fanciful manner, but through definite forms of psycho-physiological expression.

One of the tests of this harmony proceeding from proper relation of parts is found in the pleasure derived from impressions of harmony in sounds, forms, and colors. One experiences pleasure in listening to a melody; but how much deeper and richer the joy, while listening to the full harmony with it!

The chief pleasure that a melody produces is the harmony that it suggests, and the difference in the beauty of various melodies comes from difference in the wealth of the harmonies that are unconsciously awakened in the mind, while singing or listening to the melodies. The poet says:

"All are needed by each one,
Nothing is fair or good alone.
I thought the sparrow's note from heaven,
Singing at dawn on the alder bough;
I brought him home, in his nest at even;
He sings the song, but it pleases not now,
For I did not bring home the river and sky;
He sang to my ear,—they sang to my eye."

After the poet has tested those manifestations in nature and human experience which give the highest

pleasure to the imagination, and has found that nothing *continues* to give any sense of beauty when taken by itself, he concludes that beauty is a cheat, and that he will have nothing to do with it, that henceforth he will utterly ignore beauty and seek truth to the exclusion of it. But, just as the poet arrives at this conclusion, the thought is revealed to him that the reason he has been so sadly disappointed is because he has not obeyed the law of beauty. He now discovers that to get the good in beauty and thereby obtain from it what another poet declares, who says "A thing of beauty is a joy forever," he must not look for beauty in any separate object, but in the *relationship* that objects sustain to each other.

Beauty grows out of the contemplation of *truth*; and that truth is the natural *relationship* of objects in nature and not the objects themselves. No single object considered by itself is beautiful, nor does it give pleasure to the imagination in any way.

The poet continues :

"Then I said 'I covet truth;
Beauty is unripe childhood's cheat;
I leave it behind with the games of youth.'
As I spoke, beneath my feet
The ground pine curled its pretty wreath,
Running over the club-moss burrs;
I inhaled the violet's breath;
Around me stood the oaks and firs;
Pine cones and acorns lay on the ground;
Over me soared the eternal sky,
Full of light and of deity:
Again I saw, again I heard,
The rolling river, the morning bird;
Beauty through my senses stole;
I yielded myself to the perfect whole."

That which distinguishes Greek art from all others and gives it its immortality, rendering endeavor to equal it a hopeless task, is the exact relationship of all its parts. Greek sculpture does not excel in perfection of detail Michael Angelo's; but no other artists have ever developed to so high a degree of perfection the relationship of the parts. Other artists have sculptured a leg and an arm, a hand and a foot, a head and a breast, with as much accuracy and finish as have the Greeks. The difference is in presenting the relation which these parts sustain to one another. In looking at Greek art, the soul is satisfied without asking why. The satisfaction comes from the revelation of *feeling* given by the relationship of parts.

The reason of this unequalled skill proceeds, doubtless, from two causes: their great love of the human form, amounting almost, if not quite, to worship; and their opportunity of observing the nude person while in action. They were brought up in schools where the human form was an object lesson in all their studies. Their gymnastic exercises were taken when divested of all clothing, and it became the aspiration of the artist to fix in imperishable form the relation that the different parts of the person sustained to each other when in free exercise.

Attempts have been recently made to accomplish the same end by photography, and with some degree of success; but the result comes far short of that which the experienced eye of the Greek, that eye which had been trained for a thousand years, could perceive, and which Greek skill could reproduce. Great possibilities of, and strong tendencies toward, accurate observation were transmitted from generation to gen-

eration, increasing in excellence by the contributions from the improvements developed in each succeeding age, until the Greek of the Phidian period not only felt a hitherto unknown enthusiasm for beauty of form, but he had eyes that could see finer relationships than had ever been previously discovered.

This high revelation in art, which reached its climax in the Phidian period, was not due alone to the skill of the artist. The Greeks were at that time the most beautiful people, both in form and movement, that have ever existed. The systematic physical culture by which they had been educated, through a period of many hundreds of years, had cultivated their persons to stand and move in exact obedience to the laws of the *relationship of parts*. For a model, the artist had *perfection* in the forms of men and women around him.

The exercises in this fourth division are for the particular purpose of educating and developing the relationship of the different parts of the physical person. While there is some value in moving a part by itself, the essential benefit to be emphasized comes from moving it in relation to other parts.

We could refer to a long list of names of distinguished persons, such as Plato, Aristotle, Schiller, Baumgarten, Kant, Schelling, Hegel, Blackie, Ruskin, and others nearly as notable who have written learnedly and profoundly on the philosophy of beauty; but we can refer to but one man who has discovered and announced distinctive laws of practical application of the philosophy of aesthetics to human physical culture, and that man was Delsarte of Paris. This great man has been much misunderstood, even by

some of his would-be expounders ; but the principles which he advocated, no teacher of physical culture can afford to be ignorant of or ignore. The exercises which a small class is about to present before you involve those principles.

I have put the Delsarte principles into pedagogical form, thereby adapting them to personal and class drill. Many exercises which he gave will not be presented to-day for two reasons : first, there is not time ; and second, my present object is to present principles and to illustrate those principles. Some of these exercises were never given previous to my teaching them ; still, like the others, they are in accordance with the Delsarte philosophy.

Whether the particular exercises which Delsarte gave may or may not be the best for securing the realization of his principles, we shall not discuss to-day ; for the question is unnecessary to our present purpose. It is principles of physical culture we are now dealing with, not technical methods.

That which has stood most in the way of the progress of the Delsarte system of physical culture, and what I have been working for the last nine years to assist in removing, is the want of a strictly pedagogical system, which should involve the Delsarte philosophy, and also the most recent discoveries in physiology and psychology, and consequently be able to introduce into popular education and society a system of physical exercises, adapted to all classes without reference to their special calling, based upon aesthetic laws applied to the education of the body.

While physical culture is sure to work its way gloriously into the public schools, society as society,

outside of all schools, needs to practise physical culture; and this system is especially adapted to meet that demand and consequently is received with great popular favor wherever presented.

With many others, I believed for a long time that music as an accompaniment to physical exercises was a hindrance, rather than a help. Since teaching aesthetic physical culture, I have changed my mind upon that subject and have set these exercises to music. Music acts upon the nervous system in a mysterious and inspiring manner. I now consider music as valuable, and for the highest ends of aesthetic physical culture invaluable and absolutely necessary. In this, I stand strongly upon this principle in psychology which all modern psychologists agree in declaring; viz., that unity is developed from feeling, that a writer whose literary productions are marked by unity obtains that unity from his feelings, and not from his judgment. They say that it is absolutely impossible for the intellect to write according to the laws of unity in composition; but that feeling will always develop unity, far beyond what the judgment can even dictate, to say nothing of realizing. Now, one of the prime objects in the system I am presenting, as we have already seen, is unity. The impulse of feeling which music can give will help one to realize that unity. Thus we might logically say: music appeals to feeling, and from feeling springs unity.

VII.

THE PEDAGOGICAL ASPECT OF SWEDISH GYMNASTICS.

BY CLAES J. ENEBUSKE, A. M., PH. D., (OF SWEDEN,) LECTURER
AND DEMONSTRATOR OF APPLIED ANATOMY AND PHYSIOLOGY,
THEORY AND PRACTICE OF SWEDISH
EDUCATIONAL AND MEDICAL GYMNASTICS,
IN THE BOSTON NORMAL SCHOOL
OF GYMNASTICS.

From early in this century up to the present date, there has been a steady growth in the recognition of the importance of physical exercises as one of the approaches toward the aim of education.

The heroes of reformation, the most eminent thinkers and educators of the sixteenth, seventeenth, and eighteenth centuries, a Luther, a Zwingli, a Bacon, a Locke, a Rousseau, a Pestalozzi, having promulgated in writing and teaching what already the ancient people had taught in action, the time was ripe for a more practical formulation of the problem of physical training. Excited by different historical events, three European countries at nearly the same period gave to the world the most distinguished missionaries of physical education of the modern time.

In Sweden, in 1806, Ling began that career which should become of so great significance for Sweden and for the world.

A few years later, Jahn in Prussia stirred the youth

of his country, inciting the sense of duty toward sustaining bodily strength and brave manly spirit.

While at about the same time, Amoros in France founded the first gymnastic institution. Though the fate of these movements has been different, they have all contributed toward awakening, sustaining, and magnifying interest in the subject and making general the recognition of the urgent necessity of a proper care for the education of the physical forces, alongside with the care for the education of the mental forces.

The movement of Amoros has as yet rendered the least positive results. The movement of Jahn, carried by patriotic enthusiasm, animated by German social traditions, has preserved its features within the organization, the Turnerbund, that has been especially instrumental in making the movement known over the world. From the days of Jahn, the movement has been influenced, partially contradicted, modified, amplified,—first at the period of 1842 through the movement of Adolph Spiess, thereafter at about 1860 through contact with the Swedish gymnastics. At the present day, advanced German educators and physicians are considering how to make the results of the Ling movement useful in Germany.

Ling,—patriotic and enthusiastic not less than Jahn, as great in letters as in art, his record in the history of Sweden being that of “the last bard and the last Champion,”—would regenerate the power and prowess of the old north by a systematic bodily education in the youth of the land.

Spirited and lofty in his poetic fiction, vigorous and irresistible in all his actions, he was equally keen and

true in exact investigation, when endeavoring to formulate the laws upon which to found a bodily education, accessible to all, democratic in the true sense of the word. Therefore, in constructing his system, he would recognize no other authority than nature.

Nature is always one and the same ; but nature, as a moment of human consciousness, steadily though slowly changes as the conceptive power of the human mind changes its attitude toward nature.

While the Swedish gymnastics in the details of their features may have changed somewhat from the days of Ling, the essentials are still true to his teachings ; because the followers of Ling have endeavored to continue his work in the spirit he indicated, have tried to make the practical method of the work in keeping with the advanced knowledge of human nature, so far as it has any bearing upon the problem that falls within the scope of the gymnastic training. The Ling system, in one or another of its departments, is represented in all countries of Europe, except France, Portugal, and Greece, if I may quote a recent French writer. On this continent, it is not only Boston and Buenos Ayres that appreciate its usefulness. Its usefulness and adaptability to existing conditions are being submitted to an earnest test throughout our entire country. In connection with the presentation of an example of its practical working that will be given here, I invite your attention to a consideration of some of the features of the Swedish gymnastics which especially give to them the character of pedagogical gymnastics.

Gymnastic exercise is arranged with a view to developing the strength of the muscles and promoting

the efficiency of the respiratory, circulatory, and other nutritive functions of the body. This fact does not alone entitle gymnastics to a place in the curriculum on a plane with other departments of education. Even though the brain and nerves *do* share in the favorable reaction upon nutrition derived from gymnastic training, yet we are not justified for that reason alone in ranking gymnastics as pedagogical any more than we are justified in calling practical dietics, or other hygienic measures, pedagogical, that are certainly helpful to education as to every kind of human labor.

When, then, do gymnastics become pedagogical? In the pregnant meaning of the word, gymnastics become pedagogical, when the bodily movements become manifestations of the power of the mind to govern the body: to execute these movements, and to execute them in strict accord with that mental perception, which is the preceding theoretical moment of any voluntary action. Viewed in this light, gymnastic movements assume an educational as well as a hygienic character; they not only aid the development of muscular tissue, but they are the means of educating faculties. The physical basis of this relation may be stated thus: the motor-centres within the brain originate the incitation to work, which is transferred to the muscles through the nerve filaments. But back of this physical, nervo-muscular mechanism sits a mental force, the power of willing, the force of highest order in the individual, that brings the nervo-muscular machine into play. The mechanism so described represents only the single contraction of the muscle, not the movement as a whole. It represents the

degree of contraction and its intensity ; it is the force and speed of it. The movement is the result of the simultaneous or successive contractions of several muscles, working together in a certain distinct way, and the degree, force, speed, and duration of these successive muscular contractions are distinctly proportioned to one another. Over this harmonious mingling of the contractions of individual muscles presides a function of co-ordination, of which the cerebellum and commissural fibres along certain tracts of the spinal cord is the physical basis. Degree, force, speed, and co-ordination of muscular contractions therefore are presided over by the human will.

Exercise gives development. This is a law of general application. It is two-fold. It may be understood in the senses, that exercise makes structure and that exercise develops faculty. The law that exercise makes structure is of general application to all the structures that form the physical basis of the exercise. It embodies not only a building up of the bony levers, the muscles, the tendons, fasciæ, and the organs upon which they depend for their nutrition. It goes farther and embodies also the development of the structure of the nerves, the spinal cord, and the brain that partake of the exercise as do the former. But this building of structure is more directly a hygienic matter ; nay, even the building of the structure of the brain itself is a hygienic affair and only indirectly pedagogical.

The other phase of this two-fold law is that exercise develops faculty. This embraces the creation of due mobility of the joints, due contractility of the muscles, exact response between the muscles and the

incitation to contraction, due conductive power of the nerve filaments, and the power of the nerve cells of the brain and spine to originate the incitation that wakens the contraction. It embraces also the faculty of the will to govern the function of the brain-centres: those meeting points between body and mind. The development, the building of this faculty is distinctly and directly the pedagogical aspect of gymnastics. It is the faculty of the mind through the will to govern the degree, the force, the speed, and the co-ordination of muscular contractions, made manifest in the outward movements. And this is the definition of Swedish pedagogical gymnastics as formulated by Ling, its founder: pedagogical gymnastics are the means by which man learns to put his body under the command of his own will.

From what has already been said, it may be understood, that the aim of pedagogical gymnastics is that will-control which is conditional for a general bodily dexterity, not the development of any specific prowess or sleight. Thus gymnastics aim at a logical development of the fundamental and necessary faculties of the nervo-muscular machine, that it may be ready and applicable in any direction, whenever it may be called upon to act. The exercises which shall be practised for the purpose of general bodily development in pedagogical gymnastics are selected only after a careful analysis of their mechanism. By this analysis, is ascertained what the exercise in the movement in reality is. By it, is ascertained what physical faculties are involved in its execution. Only by such analysis, can be determined the value a movement possesses with reference to the gymnastic purpose, and

its proper place in the ascending scale of increasing difficulty. The external form of a movement does not express directly its gymnastic rank. We may be easily deceived. A movement that appears swift, difficult, or extended may indeed be trifling in execution and involve but small expenditure of force; while on the contrary a movement, which to the eye appears easy, as the static moment of a movement, may in truth involve great difficulties and perhaps demand an outlay of great strength.

The movements which we see are the external manifestations of internal movements which we do not see and of forces which we have the faculty to govern. Certain movements are always the symbols of certain faculties, or of a certain reaction upon the bodily system. So that, under the direction of a teacher, these movements may be made the means of training certain faculties of the pupil by bringing them into contact with appropriate resistance. By their strength against this resistance, the strength of these faculties is enhanced; at the same time, they are made the means of pouring certain physical effects into the system of the pupil.

Ling based his selection and classification of the gymnastic movements upon an analysis of their physiological components. All movements, whatever may be their character, are limited by the formation of the joints and the arrangement of the ligaments. Their study ascertains the directions in which the bony levers of the body may be moved in relation to one another, and also to what extent the movement may be carried. To be complete, a system of pedagogical gymnastics must provide for the exercise,

through all the different motions, of all the joints of the body, and each movement carried to its full extent. This may seem at first an endless task, but indeed only a very limited number of movements is necessary. But a system founded upon the formation of the joints only could be scarcely more than a joint-gymnastics. The muscles are the instruments by which the joints are moved. Their study ascertains, as may be anticipated, that the arrangement of them exactly corresponds to the formation of the joints. Each joint of the body has accompanying it a set of muscles that shall produce all the varied motions of which the joint is capable. It follows then that exercise of the joint, through all the motions of which it is capable, must call into play and so develop those accompanying muscles which are the instruments for the motions. The muscles, therefore, may be fully exercised as regards degree and intensity of contraction by as limited a number of movements as taken together shall form a complete joint-gymnastics. Such a joint-and-muscles gymnastics, however, would not be a complete system of gymnastics; it is insufficient.

It is necessary and indispensable to a complete system of gymnastics, not only that it present means for the control of the elementary motions of single joints, but that it shall also present the means of developing the co-ordination of these elementary movements that go to make up the compound movements. Of the vast number of compound movements that are possible, such are selected as are essential and necessary for a fundamental bodily dexterity: namely, such movements as, regarding the purposes of man, are necessary *per se*, and such other as are necessary con-

stituents of those necessary *per se*. For instance: locomotion and prehension are necessary *per se*, and the movements by which the variations of locomotion and prehension are brought about become necessary by them. For example: in order to give desired direction to an outward aimed force with the upper extremity, it is necessary to select that position which shall give a base for the feet, that best steadies the force and so brings the trunk into such position as offers the firmest and most distinct fulcrum for the shoulder. The variations of this physical problem, that meets everybody throughout the day, necessitate manifold variations of the position of the trunk upon the thighs, different combinations of twist and bend of the back, and modifications in the position of the thorax. The movements thus necessary to practice in a pedagogical gymnastics are selected after subjecting all movements, recorded or observed, to an analytic criticism. We dissect their physiological components so as to ascertain what exercise is involved in them. We eliminate out of their vast number those which are alike and common and retain those which are characteristic and peculiar. In this way, the vast mass of possible movements is reduced to a more limited number of types which together represent all the physical faculties of man, so far as they belong to the realm of bodily dexterity of general application. These types together represent the essential components of *all* forms of bodily activity.

The movements we practise in the pedagogical gymnastics, however, are not reduced in this way to the smallest possible number. It is necessary only that none of the essential types which I have described

be forgotten. Some or all of these types are practised in several variations, so as to give sufficient variety to the work ; but not alone for the sake of variety. Different variations of the same type may be capable of producing different reactions upon the nutritive functions. And consequently such variations must be chosen as can produce those effects which are desirable, with reference to the hygienic purpose of gymnastics.

The force and speed of muscular contractions are developed by varying the amount of resistance against the contraction and by varying its speed. There is a certain range of speed of contraction possessed by the untrained muscle. This may be widened by practice of movements that represent the lowest as well as the highest speed and so move the lowest limit of speed still lower and the highest limit of it to a still higher degree. Similarly, there is also a certain amount of strength possessed by the untrained muscle. This may be increased to a certain extent by allowing the muscle to contract under a gradually increasing resistance. It is not alone the muscles interested in locomotion and prehension that may in this way be strengthened ; also, the muscles that are instrumental in the respiratory act ; nay, even the heart may be submitted to contractions under various degrees of resistance, by varying the positions of the body.

The means by which the co-ordinative power is increased is by multiplying the complexity of the movement. The increased complexity represents the increase of resistance by which the co-ordinative power adapts itself to match higher difficulties.

By the preceding, I hope to have sufficiently indi-

cated what I mean by general bodily dexterity as contrary to specific bodily skill. If you submit a boy to a physical training, planned to make him as swift a runner as possible, or jumper, or boxer, or parallel-bar-performér, or Indian-club juggler, or equilibrist, or anything of the kind, you work in the interest of some specific bodily skill. Such specific skill has not the same general application as the attainment of the pedagogical gymnastics. Nay, even it may prove adverse to the interest of the general bodily development, structures as well as faculties; because it throws the physical energies with concentrated force into certain directions; and this is done by depriving other sides of the physique of attention in a corresponding measure. Methods that lead to the highest possible special skill are not the same as those which give the logical development of all essential faculties.

If you want a boy to be as skilled as possible in a special feat, your best plan is to try to find out in what line he is most gifted, find his road of least resistance, and lead him to be developed along that line. Where nature has already thrown the gates wide open to him, there he may be expected to reach the farthest.

If, on the contrary, you aim at his logical development to general bodily attainments, then you would better ascertain where are his weakest points, where lies his road of greatest natural resistance, greatest difficulty, and along those lines you must guide him by grading and modifying the difficulties, so that by his own benefits he may be able to gain ground, to overcome the resistance, and so develop his smallest

faculties up to a par with the strongest ones, or so far toward that end as is attainable.

The mode of working affords means to train, besides the physical prowess, the intensity and exactness of mental preception also and to cultivate the power of attention. In the pedagogico-gymnastic drill, the movement is first placed before the eye of the pupil in a model, thereafter he has to memorize the model, and, after a word of command that suggests it, he carries his body through a series of positions that faithfully copy his perception of the movement. The precision of the movement consequently is, not only an exercise, but also a test of the exactness of perception and the perfecting of the harmony between the perception and the acting forces or the muscles.

The movements of the Swedish pedagogical gymnastics present for perception and action symmetric and harmonious forms and thereby help to cultivate the sense of beauty. I have already quoted a French writer who is known to the American public by his earlier writings, Dr. Fernand Lagrange. In his article upon the Swedish gymnastics, published in the April number of the "*Revue des deux Mondes*," Dr. Lagrange comparing the French and Swedish systems of physical education calls the former "*la gymnastique de force*," the latter "*la gymnastique de la grace*."

By training, the power and ease of doing the gymnastics introduce the pupil into the pleasures of work. And so, are cultivated those forms of moral bent which we call love of activity, industry, perseverance, love of order and exactness, and the habit of atten-

tion. Thus, gymnastics offer training in physical courage, self-control, self-reliance.

The features of the Swedish gymnastics, by which they form at the same time and to a great extent a system of hygienic gymnastics, counterbalancing the influences of schoolwork that are inimical to the health, I must pass by as not belonging directly to the scope of the present paper.

Finally, there is one feature of the Swedish gymnastics which emphasizes it as pre-eminently a system of pedagogical gymnastics. It is its easy adaptability to existing conditions in the schools. If special room for gymnastics can be procured, it is no large expense to furnish it with apparatus by which a large number of pupils can be exercised during the same hour. If no specially fitted gymnasium can be had, the method is to a great extent independent of externalia, as one of its endeavors has been to systematically apply the means contained within the human body to the end of sustaining and restoring its health and educating its faculties. It would carry us too far for the present moment to explain the details of the employment of the inner resistance of the body for the development of the parts of the body and the whole. It may suffice for the present to exemplify the method by a short practical illustration, or what we term a day's order.

[CLASS EXERCISE.]

DISCUSSION.

MR. C. E. MELENEY, Superintendent of Schools, Somerville, Mass., followed in discussion of the theme of Physical Culture. He said:

At the end of a long session and after the climax has been reached in the interesting exhibition you have just witnessed, I can easily understand your impatience and anxiety to depart from this hall. I will therefore detain you very briefly, to emphasize some of the points made in the address and add some of my own conclusions.

I do not come before you as a specialist, or even as a student of the Ling system; but simply as an observer, a superintendent interested in physical education, in whose schools the Swedish system has been in operation two years. Consequently, I shall present the pedagogical value of gymnastics from observation and testimony.

We are accustomed to consider the educational values of a system of teaching, or of features of a system, in the light of *knowledge* and *power*,—that is, the amount and character of the knowledge acquired and the development of the faculties to be trained. Correspondingly, we may measure the value of physical training by the *growth* of *structure*, as Dr. Enebuske states it, and the development of *faculty*.

It seems that these two considerations are of value; but it should not be necessary for me to take your time to discuss the first, since development of strength and symmetrical growth may fairly be taken for granted, especially in view of the exhibition we have just witnessed, and since, in the judgment of the author of the paper, the "growth of structure" has been practically eliminated from the pedagogical aspects of the subject. In his words, "gymnastics become pedagogical when the movements become manifestations of the power of the mind to govern the body."

In these exercises you noticed that the body was under the perfect control of the will. One might imagine that the movements had been committed to memory and that they followed each other in a mechanical fashion as the result of a great many rehearsals; but that is not the fact. The class was under the direction of the instructor; every movement was the execution of an order. They did not know what was coming next; they had to listen for the word of command, form the concept of what was to be done and then put it into effect. That was very different from the performance of a series of movements from imitation or from memory. It required constant attention, careful thought, and prompt action. This is the essential difference between the Ling system and every other that I know. It is the vital element in military drill.

Dr. Enebuske said that the exercise must be in strict accord with mental perception,—*that is*, it must be an expression of what is in the mind. The pupil must form a clear idea of what is to be done before doing it. If you noticed the manner in which the orders were given, you remember that the commands were in two parts, with a pause after the first part, for a moment of thought in which the mind must form the idea, then the action took place at the last part of the command. This moment of thought is all important. A clear thought before action is the essence of training; this is pedagogical. It corresponds with every other work of the school that has educational value, whether of instruction or training. The exercise trains perception, thought, and expression.

Please note what Dr. Enebuske said about the devel-

opment of *faculty*. It "embraces the mobility of the joints, the contractility of the muscles, response between the muscles and the incitation to action, the conductive power of the nerve filaments, the power of the nerve cells to originate the incitation, and the power of the will to govern the function of the brain centres." Notice how he traces action from the very extremities back to the *will*. A system that accomplishes such development must be acknowledged to be educational. He says: "The building up of this faculty is the pedagogical aspect of gymnastics. It is the faculty of the mind, through the will, to govern the *degree*, the *force*, the *speed*, and the *coördination* of muscular contractions."

I can discuss this subject only from the stand-point of the observer. I have seen results. As the paper said, the movements that we see are the evidence of movements that we do not see." The inner results, the development of faculty in joints, muscles, nerve filaments, nerve centres, and brain cells, and will power are indicated by what we observe in the action and life of the children.

I have witnessed the attention, the alertness, the watchfulness, thoughtfulness, promptness, energy, vitality, exactness, and willingness of the pupil, during the physical drill and in other departments of the school work. A test of the value of any feature of education is its influence upon the child in other lines of work and in conduct generally. Its effect is to be seen in the position, whether sitting, standing, or walking, and in the general pose and carriage of the body. A test of educational value is *interest*. I have noticed that the children are interested.

Now, let me simply name some of the features of the system that make it interesting: first, every movement has a *name* and can be called for, and recognized; the children know what each movement is designed to accomplish; they learn something of physiology in connection with it; they appreciate the value of the physical drill; the exercises call for constant attention; they are constantly varying, never following in the same order; there is a continuous expectancy of something new. The movements and especially the marching and forming, or I might say the crystallizing into various shapes during the drill is pleasing; and, if an inspection day comes, the drill will make a good show.

I can testify that the teachers are interested. I have seen this at the teachers' meetings week after week, where they take the lecture on the theory and philosophy of the system and go through the drill which they are to use in their schools. They testify to the benefit it has been to them physically; they comprehend the reasons for every movement; they have a system that enables them to keep the class under complete control; they can by command bring about any movement or arrangement they wish; they can drill upon any exercise that will remedy any defect. For instance, certain physical or bodily defects are common with children, such as toeing in or awkwardness in standing. There are exercises that can be employed to correct these faults, which the teacher can use repeatedly. Individual cases can thus be reached. The teachers feel that they are getting results; they have a system that can be used in a class-room with any grade of pupils, that does not require apparatus and that does not need music.

I have seen the effect of the drill upon the teachers and the change of manner in the class-room. They speak up more promptly, ask questions and give orders in a better tone of voice and with more snap and enthusiasm. Teachers who used to sit down and conduct a recitation in a listless sort of way have changed and now put more life into their speech and action. Another point set forth in the address to show the pedagogical aspect of the Ling system is that it is designed for general gymnastics, to develop bodily dexterity, instead of specific gymnastics, which is designed to train specific bodily skill. In this respect, it is valuable in laying a foundation of bodily strength and efficiency, from which any specific attainments may be reached.

But I must hasten. Again, the movements are *expressions*, not merely exercises. As any recitation is of value to strengthen the ability to express, and to inform the teacher of the knowledge in the pupil's mind, so the movements of the drill are valuable in development of strength and in informing the teacher whether the pupil has formed a correct conception of the act to be performed. You will appreciate the point that any exercise which requires the correct comprehension of something to be done and the prompt, firm, unhesitating, and accurate performance of that effort has unquestionably educational value.

We have had the physical and intellectual value of this system of gymnastics described. There are also certain moral effects which should not be lost sight of. But I see the President wishes me to conclude these remarks. May I have a moment more to speak very briefly of some practical considerations?

To properly introduce this system, it is important

to have a supervisor regularly trained, to teach the teachers the philosophy, to drill them in the exercises, and to supervise the work in the schools. It is impossible for teachers to do this work right without proper training and good supervision. Any good thing can be easily spoiled by incompetent workers. I heard the other day of an exhibition of a class in the Ling system in a town not many miles from Boston, about which a witness said: "I do n't like that Ling system at all. I think it is horrid." Upon inquiry I found that the teacher had only seen a few exercises herself and was trying to copy what she saw. I do not believe teachers can learn it without proper instruction. Every teacher should comprehend the work from the very foundation and should drill her own classes. It should not be done by the special teacher. It need cost the town only the salary of the supervisor and it will be money well spent. I would insist upon the work being good or not done at all. [A note being read asking if Mr. Meleney would state the moral results of the Ling gymnastics, he replied:]

The moral results of a correct system of gymnastics are prompt obedience, a willing acquiescence in the direction of the commander or teacher, subordination of self to the good of the class, absolute coördination with the whole, a laudable pride in doing the best for the reputation of the school and in the order and discipline of the school, a self-respect and dignity in bearing and conduct, an appreciation of beauty in form, grace of movement and action, courage, self-reliance. It is easier to realize the moral effects from constant and continued observation than from any reports or arguments.

VIII.

THE MOVEMENT FOR PHYSICAL TRAINING IN THE BOSTON SCHOOLS.

BY WILLIAM A. MOWRY, PH. D., MEMBER OF THE SCHOOL
BOARD.

Intellectual activity and success are largely based upon healthy and vigorous conditions of the body. Lord Bacon places the good of the body in health, strength, and beauty. Soundness of body is the foundation of human happiness. Emerson's apt aphorism, "The first requisite to success in life is to be a good animal," ought to be regarded as a fundamental principle in the science of education. The history of the race, as well as the doctrine of evolution, plainly indicates that man's first development was in the direction of physical life, to which was then added the development of his mental powers. His moral and spiritual elevation makes complete the structure of the life of the race. The race has not attained perfection, and in many cases the degeneracy we deplore is doubtless due to the fact that too little attention is paid to the physical well-being.

May it not be, that under our excellent system of public education we have, during these late years, crowded the intellectual side of the school curriculum and left too largely uncared-for that physical training which is so necessary to healthy intellectual and moral

development. It is often said that the leading nations of Europe are paying more attention to physical culture for the children and youth in their schools, than we are here in America.

Various efforts have, from time to time during the last thirty years, been made to introduce improvements in the matter of physical training into the Boston schools.

In the year 1860, a definite movement was made to improve the hygienic conditions of the schools, "especially with reference to the suppression of overtaking the brains of girls, and the introduction of physical training or gymnastics as a branch of school culture."

In the report of Superintendent Philbrick, September, 1860, is the following: "Under the present conditions of city life, at home and at school, a child stands a poor chance to enter upon the career of life having a good physical system, a healthy body, strong, well formed, and of good size." Dr. Philbrick in this report after discussing the difficulties in the case, proposes the following: "The principal remedy that I would suggest is the introduction into all grades of our schools of a thorough system of physical training as a part of the school culture. Let a part of the school time of each day be devoted to the practice of calisthenics or gymnastic exercises, in which every pupil should be required to participate. The exercises which I would recommend can be practised without costly apparatus and without a room set apart for the purpose. *They contain all either sex needs for the perfect development of the body and are adapted to mixed schools, so that both sexes can perform them together.*"

Dr. Philbrick's recommendation was referred to a special committee, who prepared a very able and well-considered report upon the subject, which was submitted to the School Committee at their meeting, December 10, 1860, and was printed with the report of the Board for 1861. This report describes the system of school gymnastics invented by Professor Ling of Sweden, and then says: "This system of free gymnastics or calisthenics, in a modified form, it is deemed both desirable and practicable to introduce into all our schools, and it is recommended that it be made an obligatory branch of education." The report recommended that the time devoted to these exercises "shall not exceed half an hour each half day, nor be less than a quarter of an hour." The committee recommended the appointment of one teacher, "a suitably qualified person to aid and instruct the teachers in the training of their pupils in physical exercise."

This movement resulted in the appointment of Prof. Lewis B. Monroe, who combined vocal culture with physical and who performed most valuable service for several years.

Dr. Philbrick, in his annual report for 1874, in speaking of the services of Professor Monroe says: "His influence and labors were far more valuable and effective in promoting progress in vocal culture and in elocution, than in gymnastics and physical culture."

Dr. Philbrick further says: "The all-important point has been gained of securing a general recognition of gymnastics as a branch of school culture. It remains to be fully provided for and developed."

It is interesting also for us to observe the effect

made upon Dr. Philbrick's mind by witnessing the methods, means, and results of gymnastic training in European schools. He says in the report last referred to: "I am more than ever anxious that it should receive greater attention in America." He tells us that in the city of Vienna "100 special teachers of this branch were employed" and that "every modern school-house has its gymnasium and every school one or more gymnastic teachers."

It may be of service to us to inquire why the introduction of gymnastics into the schools of Boston at that time did not produce more satisfactory results. Every one familiar with innovations in school matters must know how difficult it is to make a permanent introduction of some new thing, especially one which requires considerable effort on the part of every teacher in the city. All advance movements are slow. Permanent improvements are reached only with difficulty. But beyond these causes, it should be observed that but one special teacher was appointed to introduce this great improvement into the schools and that he was a man thoroughly competent and accomplished in vocal culture and the art of elocution, in which he had by far a greater interest than in the matter of physical training.

At a meeting of the American Institute of Instruction held in Tremont Temple, Boston, in August, 1860, a discussion took place upon the question: "Is it expedient to make calisthenics and gymnastics a part of school training?"

In this discussion Dr. Dio Lewis took part, and he illustrated his system by impromptu exercises participated in by the teachers present in the Institute.

Resolutions were passed, approving Dr. Lewis's system as "eminently worthy of general introduction into all our schools and into general use."

It is noteworthy that, in this discussion, Dr. Wellington of Boston explained the difference between the system of Dr. Lewis and the system of Dr. Ling of Sweden. Dr. Lewis made use of rapid movements to develop strength; Dr. Ling recommended slow movements. Dr. Wellington said: "The active, rapid movements, in which so much emulation is excited, tend to excite the brain too much. He would prefer slow steady movements decidedly."

The greatest interest was excited by this discussion and in the exercises conducted by Dr. Lewis on this occasion. Free gymnastic movements and movements with bean bags soon became quite common in different parts of New England. One of the present Board of Supervisors in Boston, Mr. S. W. Mason, introduced a system into his school which was published and widely circulated.

In the report of the special committee on physical training, made to the Board in September, 1860, to which allusion has already been made, we find the following: "In the practice of gymnastic exercises, regard must be had to the constitution, strength, habit, temperament, age, and sex of the pupil. For want of proper attention to these circumstances, injury rather than benefit has sometimes resulted from these exercises. The system invented by Professor Ling of Sweden is not liable to this objection."

An elaborate and scholarly report was made by the Board of Supervisors to the School Board, June 25, 1889, upon the subject of "Physical Training in the

Public Schools," in which strong ground was taken in favor of the Ling system. This report states:

"The strongest evidence in favor of the Swedish system of gymnastics is its internal evidence: that which its purpose, its principles, its methods, and its art reveal."

The report proceeds to say:

"The following are a few of the essential facts or laws that give character and utility to the Ling system:

(a) 'Muscular development of any part of the body occurs in direct relation with the active movements to which the part has been subjected.'

(b) 'Man has, in his own organs of movement, an efficient means for the preservation or restoration of health.'

(c) Every valuable gymnastic movement has a well-defined physiological or psychical object and a definite beginning and end; requires a certain degree of effort or exertion through will or muscle; is performed in a determined time and rhythm; and describes a definite 'figure' in reaching its end.

(d) 'The gymnastic value of a movement depends upon how it combines the greatest effect on the body with simplicity and beauty of performance.'

(e) Movements may follow each other in such an order, or may be so combined or coördinated as to increase, not only the general bodily energy, but also the strength and functional power of the weaker parts of the organism.

(f) 'It is not the greater or lesser power of any part that determines the strength or weakness of an individual, so much as the proportion and harmony of the several parts.'

(g) 'In bodily development, beginning with the simplest, you may gradually advance to the most complicated and powerful movements; and this without danger, inasmuch as the pupil has acquired the instinctive knowledge of what he is or is not capable.'

A Standing Committee on Physical Training was appointed by the Boston School Board, Jan. 16, 1890, and this committee reported in full to the Board, June 10, 1890. Free use has been made of their report in this paper, since the ground necessary here to cover was carefully gone over in that report. That committee said to the Board:

"The first thing to be attended to is the introduction of a proper system of gymnastic exercises which can be carried on in the ordinary school-room with little or no apparatus. Your committee are convinced that an exercise by the children in the school-room of ten or fifteen minutes, near the middle of each day's session, regularly continued, not for a month or a year, but throughout the entire school life of each boy or girl, will be productive of important results. Such exercises, so carried on, will take but little time from the lessons of the day. They will be attractive to the pupils of all ages. They will prove of great relief to the nervous tension. They will not only be restful to the body, promoting a proper circulation of the blood, keeping the entire system in a vigorous condition, but they will promote good humor, cheerfulness, and a natural, easy, and healthy tone of mind. In short, these exercises will add much, not only to the health, but also to the happiness of both teachers and pupils.

Bearing in mind the experiences of different sections of our country, and of many of the best schools of Germany for years past, your committee are fully aware of the advantages to accrue from a properly equipped gymnasium in connection with every large school-house.

Doubtless it will be found true that the best results will be obtained where the daily short exercises in the school-rooms can be supplemented by an hour's vigorous exercise twice a week, or oftener, in the gymnasium.

But it is believed that the most important thing to be done at the present time, that which must be admitted by every one to be necessary and wise and that which will produce the most satisfactory results, is the immediate introduction of free gymnastic movements into every room throughout all the grades of the schools.

These things being agreed upon, your committee turned their attention to the question, What is the best system to be introduced? Here at the outset the query arises, What is the particular object to be secured by these exercises? Is it merely grace of movement? Is it strength of muscle? Is it quickness, activity, agility? Is it simply elasticity, suppleness? Is it healthy pulsation of the heart and circulation of the blood? Is it merely rest from study and change of position? Should we confine ourselves to the consideration of the question, What will best promote relaxation from the mental strain of the school-room? Shall we not rather strive to combine all these several advantages, so far as may be possible?"

"The so-called Ling system, or Swedish system of

educational gymnastics, has received careful attention from your committee. We have been fortunate in having many excellent examples set before us in some of the best schools of this and other cities and we have witnessed these operations, in some cases under the most favorable circumstances, in other instances the most unfavorable. We have noticed the effects upon primary children, grammar school pupils, and in high schools. We have sought the opinion of our best teachers and most eminent educators and have had ample opportunity to examine the subject."

A well-known master of one of our best grammar schools, who has used the system for a year and a half, writes to the committee as follows:

"I like the Swedish, or Ling, system of gymnastics for the following reasons:—

"1st. It is a system fully elaborated and tested by more than half a century.

"2nd. It is admirably progressive, both as regards the "day's orders" and the needs of the various grades from the lowest primary to the high school.

"3rd. It is evidently designed to make healthy children, and not to train athletes.

"4th. It is well calculated to aid in discipline, since the word of command takes the place of music.

"5th. It gives opportunity, thus, for the teacher to make suggestions and to give individual instruction.

"6th. It devotes so much attention to the standing position and carriage of the pupils.

"7th. The exercises are selected for beneficial ends, and not because they are pretty.

"8th. There is great freedom from liability to produce injurious effects.

"9th. It is cheap, since no apparatus is essential, for a time at least.

"10th. There is such an infinite variety of exercises that pupils do not tire of them.

"Permit me to add, that, after watching the work of the system for more than a year and a half, I am delighted with it and wish it might be adopted just as it is. I would not make any attempt to Americanize it. Having been recommended by an able sub-committee of your Board thirty years ago and having recently received the endorsement of the Board of Supervisors, I hope the time has come when the recognition of the School Board shall be given to it."

Another master writes the following: "In my opinion, the Swedish system of gymnastics is far in advance of any other system with which I am familiar. I have practised with Dr. Dio Lewis's system, and have exercised under Dr. Winship in his gymnasium for two or three years, but have never received the benefit from either that I have received while practising the Swedish system this year.

"All my teachers are very enthusiastic in regard to the exercises. Unlike all other systems with which I am familiar, every movement is based upon a physiological principle. The exercises are so admirably graded that they are well adapted to all grades of pupils and can be used to good advantage in the school-room.

"They are so varied that the children do not have to repeat the same exercises each day, consequently they look forward to them with pleasure.

"While teaching these exercises, one does not feel that he is going through with some pretty movements

simply, but that he is teaching what will make his pupils stronger, more healthy, and more graceful in their movements, and enable them day by day to bring their bodies under more complete subjection to their wills. Many pupils during the year have told me that the exercises have proved very beneficial to them, and that their parents and friends had noticed marked improvement in their standing and sitting postures at home."

One of the special features of this system of gymnastic exercises is the careful attention which is paid throughout to the gradation of movements in what is called the "day's order."

In some other systems, the influence of the muscular exercises upon the heart and lungs appears to have received too little attention. In the Swedish system, if an exercise is arranged which shall occupy fifteen minutes, at the beginning simple, easy, quick movements are taken. Those of the first three minutes prepare for what follows in the fourth and fifth minutes. Following the first five minutes the exercises will be more and more vigorous, causing a stronger heart beat, and forcing the blood through the arteries; thus the action is increased through eight or ten minutes. During the last five minutes of the exercise the movements will, so to speak, "slow down," causing a diminution of the action of the heart, so that at the close the heart beat will be reduced well toward its normal action. Of course this method produces a similar effect upon the lungs.

This committee stated their conclusions as follows:

"From all these considerations, and as a result of

the observations which your committee have made, together with such study as they have been able to devote to the literature of this subject, they are strongly of the conviction that :

(1) The time has fully arrived when gymnastics as a branch of school culture should be introduced into all the public schools of the city.

(2) The Ling or Swedish system of educational gymnastics is in all respects best adapted for use in these schools.

(3) Such measures should be taken in introducing this system as will best insure its efficient and permanent practice.

(4) To this end special instructors, thoroughly trained in the system, should be employed to instruct the teachers and to supervise the practice of the system in the schools of all grades, and it should be the duty of the supervisors in their official visits to the several schools to see that this new branch receives proper attention.

(5) Not less than ten minutes nor more than fifteen minutes should be used for these exercises during each school session.

(6) These exercises should be conducted under the direction of the regular teachers in the different school-rooms."

On June 24, 1890, the School Board adopted by a nearly unanimous vote an order to introduce into all the public schools of Boston the Ling or Swedish system of gymnastics. It then adopted an order looking to the election of a Director of Physical Training, with one or more assistants.

Dr. Edward M. Hartwell, Director of the gymna-

sium at Johns Hopkins University, Baltimore, was elected by a unanimous vote of the Board a few months later and entered upon his duties, January 1st, 1891. Early in the spring, Mr. Hartvig Nissen was appointed as assistant. Mr. Nissen is a Norwegian by birth, is thoroughly educated in both the educational and medical gymnastics of the Swedish system, has had a large experience, and is doing excellent work.

Under the direction of these two gentlemen, this system of school gymnastics has been rapidly introduced and is now quite generally practised by the pupils of the schools of the entire city.

It is expected that two other assistants, ladies, will be needed to give the system the greatest success and to keep a uniformity of practice throughout all the schools of all grades in the city. It should be remembered that the boys in the ten high schools of the city have also military drill, under the direction of a competent officer as drillmaster and instructor. It is found in actual practice that the two systems do not conflict with each other; but that the one supplements the other, the Swedish "setting up" drill being an important aid in the military exercise and that exercise giving an erect carriage and elastic walk which supplements the gymnastics.

When this movement shall have been put into the best and most successful practice in every school, then further questions will arise. Shall the city furnish gymnasiums with proper apparatus and other appliances? Shall every new school-house have a gymnasium connected with it? Shall other gymnasiums be opened by the School Board in different parts of the

city, utilizing perhaps the militia armories and other suitable buildings for this purpose? Shall out-door gymnasiums be established in the different parks and upon the Common? These and other questions will arise as time goes on and necessities present themselves.

It might be noticed that this system is really quite inexpensive. In Europe, a single city has more than a hundred special teachers of gymnastics in her schools. Chicago has sixteen.

By the system introduced into Boston no apparatus has, as yet, been found necessary, and in addition to the regular teachers only two special teachers are yet employed by the whole city. Boston has a population of nearly 450,000. Her public schools number nearly 70,000 children and have about 1,600 teachers. She spends annually about two and a quarter millions of dollars upon her schools, which is a sum larger than any one of thirty states devotes to educational purposes, including the other five New-England states. There are but four cities in America which spend a larger sum for schools, viz:—New York, Brooklyn, Chicago, and Philadelphia, and the amount per capita in Boston is larger than in any one of them.

The new movement thus far has shown that this system is popular with the pupils, the teachers, the physicians of the city, and the people generally. Its educational value is apparent and is highly appreciated by many of the best teachers, and by the Superintendent and Board of Supervisors. Its adaptation to benefit the general health of the pupils and to promote a more healthful development of the physical system is rapidly becoming apparent to all.

On the whole, it must in truth be said that the introduction of the Swedish system of educational gymnastics into the schools of Boston is thus far a complete success.

IX.

SOME ASPECTS OF ATHLETICS AND GYM- NASTICS AT HOME AND ABROAD.

BY EDWARD MUSSEY HARTWELL, PH. D., M. D., DIRECTOR OF
PHYSICAL TRAINING IN THE PUBLIC SCHOOLS
OF BOSTON, MASS.

Mr. President, Ladies, and Gentlemen: I am to speak to you this evening concerning "Some Aspects of Athletics and Gymnastics, at Home and Abroad." I shall consider some of the more salient peculiarities of school games and school gymnastics, as they are practised to-day in England, Germany, and Sweden. For the purpose of giving fuller and clearer effect to my descriptions of schools, play-grounds, gymnasias, and forms of exercise, I shall supplement my remarks by exhibiting to you a series of lantern-views, which have recently been prepared to illustrate this subject.

Before entering upon the discussion of specific forms of athletic and gymnastic exercise, I beg to invite your attention to a consideration, in a very general way, of the nature and effects of exercise and of the most typical national systems of physical training.

According to modern physiology, the human body is an aggregation of a vast number of individual cells which differ from one another in lineage, form, and function. These individuals are so grouped with

relation to one another in our various organs, that the body as a whole is to be considered as a communal structure, a sort of federal union of tissues and organs. Again, the body as a whole is a machine in which the potential energy of organized material is transformed into the work which we see manifested in motion, animal heat, and the chemical actions involved in nutritive, secretory, and excretory processes. It is estimated that the tissue-changes, of which an adult human body weighing one hundred and forty pounds is normally the seat, involve the transformation of more than a ton of material in the course of a year. Muscular activity is one of the chief agents in promoting tissue-changes in all the bodily organs and in determining the normal growth and development of the organism as a whole.

Broadly speaking, the skeletal muscles and the skeleton constitute the working or executive machinery of the bodily organism. The most obvious result of orderly and well regulated exercise is seen in the normal growth and development of the executive machinery itself. In this connection, it is well to recall the all-important fact that none of the skeletal muscles is a simple organ. Every skeletal muscle is made up of two conjoined mechanisms: a contractile, executive mechanism, the muscle proper, and a stimulating, regulative mechanism consisting of nerve fibres and gray matter nerve cells. In other words, the executive machinery of the body is indissolubly bound to the nervous system and is animated and governed by it. The muscular and nervous tissues have been well termed the "master tissues." In this sense nervous tissue may be characterized as "the

masterful tissue." All other tissues, omitting the indifferent and supportive tissues, such as bone and cartilage, may be classed under the head of "tissues of digestion" or "tissues of excretion"—which are the terms used by the English physiologist, Michael Foster, who points out that "the whole of the rest of the body is engaged (1) in so preparing the raw food, and so bringing it to the nervous and muscular tissues, that they may build it up into their own substance with the least trouble; and (2) in receiving the waste matters which arise in muscular and nervous tissues, and preparing them for rapid and easy ejection from the body."

The muscular system has, then, two sets of servants, its purveyors and its scavengers. The former prepare and serve the master tissues with food-materials, and the latter clear away the refuse matters which result from the chemical and mechanical processes by which the functional activity of the executive machinery is signalized. The digestive and assimilative organs and the arterial section of the organs of circulation and respiration belong to the first class; and the venous section of the circulatory and respiratory organs, the perspiratory, and the urinary organs constitute the second. The purveyor and scavenger tissues serve each other as well as the master tissues, it may be remarked, and are, like the muscles, controlled by the *Archaeus* of the body, if we may so denominate the nervous system.

Next to the movements due to muscular action, the most direct and obvious effects of exercise are increased circulation and ventilation of the blood. The effect of exercise upon the processes of digestion,

sanguification, and excretion is an indirect one ; those processes being modified, so far as muscular activity is concerned, by the changes wrought by it in the volume, distribution, or character of the general blood-stream. But the most important effect of muscular exercise, though it is usually overlooked, is to be found in the structural and functional improvement of the nervous system, or rather so much of it as is concerned in the regulation and control of the skeletal muscles. Lack of time forbids my undertaking to fully elucidate this point, though there is abundant and most conclusive evidence that the brain, spinal cord, and nerves depend, for their structural integrity and functional power, very largely upon the normal working of their executive end organs, the skeletal muscles.

The effects of exercise upon a single muscle are chiefly two. On the one hand, there results a general condition which may be termed the heightened health of the neuro-muscular machine, which state of health involves the attainment and maintenance of a normal degree of size, strength, and working power in its structural parts ; and, on the other hand, a more complex and special effect, viz.,—the acquisition or organization by its neural parts of proper habits as regards the origination, transmission, and regulation of stimuli. The ends of exercise may be characterized, then, as the promotion of health and the acquisition of correct habits of action. The first is a hygienic end, while the second is a distinctly educational end. It matters not whether we consider a single muscle, which admits of only a single limited motion, or a group of muscles, or the communal structure we call

the human body, or a class of school-children, or a foot-ball team, or a regiment of soldiers. The ends of exercise in each case are the same and can only be attained by a combination of hygienic and educational measures.

The main field of education is the nervous system, and the principles of all forms of physical training, however various and divergent their special ends may be, are based upon the power of the nervous system to receive impressions and register them or their effects; in other words, upon its ability to memorize the part it has played in acquired movements, and on occasion to recall and revive such movements.

It is coming to be clearly recognized that the function of our public and preparatory schools and colleges is not to fit their scholars to engage as specialists in either intellectual, commercial, or industrial pursuits. The same rule holds good as to the kind, or rather degree, of physical training which should be aimed at in our schools and colleges. It is not their business to train up ball-players, carpenters, clerks, or professionals of any kind. General bodily training is the kind demanded; but training so general that it is vaguely, or spasmodically, or half-heartedly carried out, or worse still, that is left to run itself in accordance with the whim or frenzy of the persons to be trained, will surely and deservedly fall short of success. Intelligence, system, organization, funds, and patience are just as indispensable in physical training as in the training of engineers, musicians, or philologists.

Pastimes, out-of-door sports, and systematic gymnastics are the forms of exercise which yield the best

results in the physical training of school children and college students. The plays of the kindergarten, the athletic sports to which British and American youth are so devoted, and the systematic gymnastics of the Swedes and Germans have all developed from one germ, from healthful play, that is; the vital energy of this germ is found in the ineradicable impulse of all healthy children to play.

In the athletic sports of young men, we see the fullest expression of the play instinct. The essential difference between athletics and gymnastics is one of aim. The aim of athletics, unless of the illegitimate professional sort, is pleasurable activity for the sake of recreation or rivalry; that of gymnastics is discipline or training for pleasure, health, and skill. We have but to compare the aims, methods, and results of these two departments of exercise and to call to mind the characteristics of the nations which have affected athletics on the one hand and gymnastics on the other, to perceive that gymnastics are more highly developed and present more features of educational value. Gymnastics, as compared with athletics, are more comprehensive in their aims, more formal, elaborate, and systematic in their methods, and are productive of more solid and considerable results.

I have no disposition to disparage athletic sports. I would that they were more general and better regulated than they are in our country. I believe that they are valuable as a means of recreation; that they conduce to bodily growth and improvement; and that their moral effects are of great value, since athletic sports call for self-subordination, public spirit, and co-operative effort and serve to reveal the dominant

characteristics and tendencies, as regards the temper, disposition, and force of will of those who engage in them. But they bear so indelibly the marks of their childish origin, they are so narrow and vain-glorious in their aims, so crude and unspecialized as to their methods, as to render them inadequate for the purposes of a thorough-going and broad system of bodily education. It is well to promote them and it is becoming increasingly necessary to regulate them; but it is unwise and short-sighted to consider them as constituting anything more than a single stage in the best bodily training.

Gymnastics have been most popular and general among the most highly trained nations, such as the Greeks of old and the Germans of to-day. The most athletic, and at the same time one of the most ill-trained, of modern nations, is the British. I mean simply this: that an Englishman believes, and acts on the belief, that one comes to do a thing right by doing it, and not by first learning to do it right and then doing it; whereas the Germans and Swedes leave little or nothing to the rule of thumb, not even in bodily education.

It seems to me that the most representative and typical forms of physical training are five in number and may be styled: (1) the Grecian; (2) the Mediaeval or Knightly; (3) the British; (4) the German; and (5) the Ling or Swedish.

In speaking of the most general features of the five types or national systems under review, it will be convenient to use the terms *agonistic*, *gymnastic*, and *athletic*, which are derived from Grecian usage. An ἀγών [*agōn*] meant originally an assembly; then, an

assembly to witness a contest of some sort. For instance, the Olympic games were gymnastic *agones*, being so called because the *agonists* and *antagonists* were γυμνοί [gymnoi] or naked. The prizes given to victorious *agonists* were termed ἄθλα [athla], and the term *athlete* came to be used to designate a winner, or contestant; later, an *athlete*, in the worst sense of the word, was a prize-fighter governed by professional and mercenary ends. A *gymnast* was a trainer primarily, especially after the agonistic games had become systematized and regulated.

Greek physical training was, then, *agonistic*, during the period of its growth, when its main purpose was to afford sport or pastime; it was *gymnastic*, during the period of its best estate, about the time of Pericles, when its aims were distinctly educational and ethical; and it became *athletic* in the worst sense of the word, during the decadence of the institutions and independent life of the Greeks, when a spirit of mercenary self-seeking and brutal professionalism dominated both gymnasts and athletes.

Using these words in the sense indicated above, we should term the martial exercises and games of the ancient Gauls and Romans agonistic. Out of these sports and exercises, were developed the physical training of the young page and squire and the chivalric tournaments and justs, to which the knights of Italy, France, Germany, Britain, and Scandinavia were so devoted in feudal times. That training and those contests were partly agonistic and partly athletic in their nature. The same terms may be applied to British sports. They were agonistic and have become chiefly athletic within the last seventy-five or one hun-

dred years. Athleticism is the dominant note in all British physical training, which has but little of pedagogical aim or method in it and is even less deserving of being called gymnastic than was the mediaeval sort of physical training. German turning is somewhat agonistic in character, though its aims and methods are gymnastic, in the main. No modern system of physical training so well deserves to be styled gymnastic as does the Swedish system, which has scarcely enough of the athletic element in it. In the Swedish gymnastics, moreover, we find a high place accorded to medical gymnastics. Indeed, excepting the Grecian, no system of medical gymnastics worthy the name is to be found outside of Swedish gymnastics.

For our present purpose, we may take the Grecian and British systems of bodily training as affording the most typical expression of the gymnastic and the athletic idea respectively. Although differing widely in most respects, these two systems are alike in being devoid of any admixture of elements acquired through imitation or borrowing. British sports reflect more fully, perhaps, than any modern system of physical training, the national spirit of their devotees. They are the necessary inherited pastimes of a manly, vigorous, self-sufficient folk; and have never fully outgrown or lost their primitive, not to say pagan, characteristics. They have been followed largely for their own sake and have suffered but slight modification through the influence of innovating educators and thinkers, presenting, in this respect, a marked contrast to German turning and Swedish gymnastics, which, though they bear the impress of national feeling, have been developed chiefly of set purpose on the part of their

promoters, either as a means for national regeneration or as a remedy for over-refinement and the deteriorating effects of sedentary and urban life. Such modifications as are inevitable in British sports are due mostly to efforts to make them more social and general, in short more truly popular. Then, too, the English climate is singularly favorable for the pursuit of athletic sports. The summer is so cool and the winter is usually so mild, in England, that there are comparatively few days in the year, when one may not, if he will, engage in out-of-door games of some sort. Indeed, the climate, more than most climates, acts as an incentive or provocative to active exercise. Muscular activity is more conducive to comfort than is quiescence or loafing, in most varieties of English weather. Riding is always in season. Foot-ball is practicable, not only throughout the autumn and winter,—in ordinary winters,—but also far into the spring. Rowing may be practised during more than three quarters of the year. Cricket, being dependent on the state of the turf, is little played but in the spring and summer.

The English public schools are peculiarly adapted to serve as nurseries of the national pastimes. The oldest of them, Winchester and Eton, were originally ecclesiastical foundations and have served, in a measure, as models for most of the later foundation schools, which as a class have departed less widely from their mediaeval prototypes than have the secondary schools on the continent. In England, the public schools, which are boarding schools for boys from 10 or 12 to 19 years of age, enjoy a practical monopoly of secondary education. On the continent, if we except the French

Lycées, high class boarding schools for boys are the exception. Moreover, the continental standard of intellectual training is higher and the methods of instruction more exacting and severe, so that pupils in a German, Swiss, or Scandinavian *Gymnasium*, or in a French *Lycée*, have much less freedom and leisure than the boys at Eton, Winchester, or Rugby, where the half-holidays average three a week. Force of public opinion generally, and often the rules of the school, oblige the English boy to take part in the school games. Owing to the combined influence of tradition, public opinion, and the peculiar organization of the schools and universities, which set the tone in the athletic world, British interest in British sports, by reason of its universality, intensity, and intelligence, stands alone. Though teachers and governing boards are sympathetic and helpful as a rule, British athletics, as an institution, have been shaped chiefly by successive generations of boys and "Old Boys," as public-school graduates are wont to be called. It is doubtful if school and college athletics will ever be properly managed in this country, before a generation of teachers, presidents, and trustees shall arise, who have enjoyed the advantages of athletic training in their youth.

As regards length of days, British sports come next to the Grecian games. The tournaments and justs of the Middle Ages lasted scarcely 400 years; German turning took its rise in the last quarter of the last century; Swedish gymnastics have not reached their ninetieth birthday; but the history of the Grecian games extends over nearly 1400 years, from the days of Homer till 394 A. D., the date assigned to the last celebration of the Olympic games.

In the breadth and sanity of its aim, in the magnitude of its proportions, and the completeness of its development as a national institution, in the perfection of its organization, in the splendor and solemnity of its festivals, in its many-sided and abiding influence, as well as in the length of its history and the brilliancy of its record, the physical training of the Greeks has no parallel. Its history forms a coherent whole, presenting well marked phases of growth, culmination, and decay and reflecting at every stage the spirit of the nation. Athletic contests entered into the worship of Greek gods and heroes, and the lapse of time was reckoned in Olympiads to mark the recurrence of the principal sacred games. Gymnastics were assigned an enlarged and honorable place in the training, both for peace and war, of every free-born boy and youth. The codes of Lycurgus and Solon provided for the organization and regulation of bodily training; and the management of it, during its best estate, afforded positions of honor and emolument to distinguished and ambitious men. It furnished themes for poets, philosophers, and historians. Sculptors and painters sought the palaestra and gymnasium for their fairest models, and even the greatest of Greek physicians thought it no condescension to study and adopt exercises and procedures which had been originated by paedotribes and gymnasts.

The principal exercises taught in the palaestra and the gymnasium were: running, leaping, wrestling, throwing the discus, hurling the spear, boxing, and the pancration, a combination of boxing and wrestling. Various games of ball were in vogue, and much attention was paid to swimming and bathing. The

Greek training was severe, that of candidates for the Olympic games lasting for ten months. It was mostly conducted in the open air, often under a blazing sun. In their practice exercises and in their matches, the athletes were naked. They were oiled and sanded before their exercise and scraped with a strigil, shampooed, and bathed after it. Their dietary was also carefully regulated; so, too, were their hours of sleep and practice. In none other of our five national systems of exercise, has "training" been carried to so high a pitch or been so well ordered, as it was among the Greeks. So far as I know, no especial attention was paid to dietetic rules by the contestants in either knightly or popular games in the Middle Ages; and "training," in the sense in which it is employed by those who are addicted to British sports, has practically no followers in Germany or Scandinavia, outside the ranks of professional acrobats and Anglomaniacs.

But the Greek gymnasium was much more than an aggregation of wrestling pits, running tracks, exercise halls, and bathing establishments, surrounded by colonnades and shady walks. The Athenian gymnasia were clubs and schools as well, provided with lecture halls and quiet nooks, to which the young men and elders of the city resorted for instruction and social intercourse. It is noteworthy that, even among the Greeks, the word *palaestra* came to mean a school; and that the most highly educated of modern peoples, the Germans, designate the highest of their secondary schools by the term *gymnasium*. The French word *Lycée*, derived from Lyceum the name of the gymnasium in which Socrates and Aristotle taught philosophy, is used in the same sense as the

German *gymnasium*. Antisthenes, the founder of the Cynic school of philosophy, taught in the Kynosarges gymnasium. The masters in art and science, the world over, are content to be styled academicians, in memory of the Academy of Plato, which was one of the public gymnasia of Athens.

No modern nation has been or is likely to be leavened with the Greek leaven. The Grecian type of physical training has never been reproduced. It must ever remain unique, for the same reasons that forbid us to look for the rise of a new Sparta or a second Athens. Of modern forms of physical training, the Swedish and the German have more of the broad, idealizing, pedagogical spirit that characterized Greek gymnastics, than has the British. Each of these national systems of physical training presents an interesting and instructive field for study, especially as each of them has exerted and still exerts a marked influence upon the minds of those who are concerned about the bodily education of American youth. It is well to remember, however, that British athletics have been created by the British boy, who has forced his masters to grant him place and time for his sports, sometimes at the expense of the school programme; while the school and military gymnastics, which enter into the training of the Swedes and Germans, have been devised by the teaching class and imposed as school tasks upon the taught. Naturally enough, the American boy, in school and college, is more emulous of his British cousin, than of his more remote kindred, the Teutonic or Scandinavian pedagogue.

We come now to a closer consideration of some of the more striking features of athletics and gymnastics,

as they are practised in England, Germany and Sweden. I will not detain you with any detailed comparison between Swedish and German school gymnastics, as I shall have occasion, in my remarks upon the lantern views which follow, to note the differences which characterize British, German, and Swedish methods and usage. I have said nothing of American systems of physical training, for the reason that as yet no comprehensive native system of American gymnastics and athletics has been evolved. There are numerous partial and inchoate schemes; but none of them is likely to supplant or supersede any of the modern national systems of which I have spoken. The American system, when it comes, will probably be an eclectic system, combining the athletic element found in British and American sports, the pedagogical principles and procedures of the Swedish school gymnastics, and certain features peculiar to the popular gymnastics of the Germans.

A large number of lantern-slides were then shown, for the purpose of setting forth the essential differences between athletic sports and school gymnastics.

By means of views, taken from antique statues and vase-paintings, attention was called to the type of men produced by Greek athletics and gymnastics. Modern types were illustrated by means of group-pictures of English, French, and German school boys. Eton and Rugby being chosen as representative English schools, some of their peculiarities as to organization and management were noted; the facilities afforded their pupils for engaging in cricket, foot-ball, rackets, fives, swimming, and rowing were described; and their most striking features illustrated by views of

grounds, buildings, and players. Rowing, as being one of the most characteristic of British sports, received especial attention from the speaker, who made use of a full series of instantaneous views of aquatic sports at Oxford and Cambridge. Views of German and Swedish schools, gymnasts, gymnasia, gymnastic exercises and apparatus followed; and the two systems of training were contrasted.

In conclusion, views of several of the most typical of American college gymnasia were shown. Attention was called to the fact that American educational authorities had attempted but little and accomplished less, toward building up a genuine system of physical education based on sound pedagogical principles and the best experience; although they had shown much zeal and not a little extravagance, especially among the colleges, in erecting buildings and laying out grounds for athletic and gymnastic purposes. It was also stated that the most expensive and best planned gymnasia in the world, for the use of girls and women, are to be found in America. The teaching in the best of the gymnasia for women is in the hands, either of Swedes, or of those who have adopted Swedish methods. Just at this juncture, the women's colleges and the public schools of Boston, Chicago, Cleveland, and Kansas City are clearly in the lead of the schools and colleges for men, as regards the adoption of sound and successful methods of instruction in physical training. There is a crying need, from the primary school to the university, for genuine teaching in this department. Given well-trained and well-paid teachers, and the questions pertaining to brick and mortar and machinery will take care of themselves.

X.

THE BEST ORGANIZATION FOR A MANUAL TRAINING SCHOOL IN AN URBAN COMMUNITY.

BY CALVIN M. WOODWARD, A. M., PROFESSOR OF MATHE-
MATICS IN WASHINGTON UNIVERSITY AND PRINCIPAL
OF THE MANUAL TRAINING SCHOOL, ST. LOUIS, MO.

No attempt is made in this paper to treat of manual work in the grammar school. It assumes that the pupil has had such hand training as may be secured in the lowest and the grammar grades. Whatever one may care to include under the term manual training, it is pretty well understood what a "manual training school" is. The name designates a complete school with a full daily program, and not, as at Cambridge, an annex providing only the features of shopwork and drawing.

Should manual training be introduced into existing high schools in a distinct course of study, or should separate schools be organized to be known as manual training high schools? The answer to this question should be based on a full consideration of the constituency to be counted on, or the probable demand for manual training; and, secondly, on the chances for successful management.

I. THE CONSTITUENCY.

While claiming that manual training should to a certain extent enter into the education of every boy

and girl and also that no assumption should be made as to the future careers of pupils in manual training schools, it is evident that a manual training school is sharply distinguished from a classical high school and from a commercial high school, by its clear recognition of the demands of industrial occupations. There is of course much common ground in the three kinds of school, but only their distinguishing traits are now referred to. I am willing to admit that the popular demand for manual training arises from a conscious desire on the part of parents and children for an education which shall in a direct and evident manner prepare for the duties and responsibilities of life. The existence of this desire proves nothing as to the destined career of particular people. A large majority of our men are engaged in manual occupations, such as agriculture, manufacture, construction, and transportation; and it is only reasonable to suppose that a school which fairly represents the people will contribute workers to carry on such work, even though they greatly improve its quality and widen its scope.

The belief that there is a school education which, while very general in character, bears in the industrial direction as no former education bore, and that it is capable of giving higher intellectual standing to industrial workers, as well as tending to their social and financial success, is what gives strength to the manual training movement in every community.

There is no question but as a rule those, who for any reason look forward to industrial life and who see no manual training school open for them, withdraw from school before the high school is reached. This is emphatically true of boys. Hence, the great major-

ity of boys of high school age are not at school. The census tables show that between seven and eight per cent. of the population of a city consists of boys and girls in their 15th, 16th, 17th, and 18th years.

Suppose a city has 100,000 people; there are then about 7,500 young people between 14 and 18 years of age. Not one tenth of them are in the high school and from two thirds to four fifths of them are not at school anywhere. These unschooled youth are not all stupid, nor vicious, nor poverty-stricken. Fully one third, if not one half of them, are so constituted and so situated that they would attend a manual training high school, if one were open to them. When, last January, I urged the mayor and school committee of Boston to establish an independent school for manual training, I told them that they would have 1000 boys applying within three years, without sensibly interfering with the attendance at the Latin School or at the English High.

The experience of Philadelphia is suggestive. Its first manual training high school was crowded for some years and applicants were turned away. A second school of the same kind was established over a year ago. The pupils leaving the grammar schools apply as they choose to the old high or to the manual training high. Pupils are admitted to the latter in the order of their standing in the grammar schools. I am told that the son of the president of the school board did not stand high enough to secure admission before the door was shut. It is the same in St. Louis.

You will find the same conditions in every city. It is a new idea that there is an education which precedes industrial life as appropriately as there is one

which precedes mercantile or professional life. Until recently, it was taken for granted that it took no great amount of brains to be a skilled mechanic, and that an education was largely wasted on one so long as he remained a mechanic. "Why, what are these boys studying Latin for?" said an astonished visitor to me the other day, as, in our tour through the St. Louis Manual Training School, we came across a class in Cæsar. Said I: "What did you study Latin for?" "I am a Bachelor of Arts," was the all-sufficient reply.

It was formerly assumed that a skilled worker in the materials of construction need not be a draftsman, nor a mathematician, nor a chemist, nor a physicist, nor a master of English. It is now known that every one of these things helps, not only to make one more respected and more influential as a citizen and a man, but to be a better and a more successful mechanic.

This idea is having immense influence among the people in favor of more education and what they consider appropriate education. A second idea is that intellectual vigor and practical power over men and things are the fruit of more than one course of study. Already is it seen that the graduate of a manual training school has many advantages, when compared with those whose education has neglected either hand-culture or brain-culture.

Hence, without further excursion in this fruitful field, I conclude that there is in every city an abundance of good material, backed by a wide demand, for a high school in which the manual elements shall be essential features entering into the course of study of every pupil.

II. AN INDEPENDENT SCHOOL WITH A FULL CURRICULUM.

It may be said in answer to the above conclusion, that I have shown only that there is a large constituency from which it is reasonable to expect a large attendance upon high schools which include manual training, and that I have yet to show that it is better to establish independent schools, in the place of enlarging and extending those already existing.

This is a question of policy worthy of serious consideration. In point of fact, usage is not uniform. In Baltimore, Philadelphia, Chicago, and St. Paul, (and prospectively in Boston and Providence,) they have complete and independent public manual training schools. If to these we add schools really organized for general education but not under public management, I should mention those of Chicago, Cincinnati, San Francisco, New Orleans, and St. Louis.

The great majority, like those of Toledo, Cleveland, Cambridge, Springfield (Mass.), Minneapolis, Omaha, New York, Louisville, Davenport, and Albany, have incorporated manual training courses of greater or less extent into existing schools. This latter course was the natural one, so long as the value and popularity of manual training was uncertain. It took considerable courage to establish the St. Louis school, and no board of managers would have been justified in using public money for such a purpose. St. Louis was fortunate in having men who had courage as well as money. Three years afterward, the school board of Baltimore, being fully informed of the success in St. Louis, exhibited both courage and

good judgment in establishing an independent manual training school as a part of the city system. The last catalogue of that school shows an attendance of over five hundred boys.

When a different plan has been pursued, there has been generally abundant justification. There was much that was to be learned, both as to the demand and as to the methods of meeting it, and school boards were wise in moving slowly and in trying experiments in connection with existing schools. I claim, however, that now the experimental period has passed and that we can point out with confidence the essential features of the best method.

Assuming then that a city has decided to furnish to its youth opportunity for manual training, what are the specific reasons against an incorporation with the existing high school and in favor of an independent organization? Some of the following arguments will have far less force ten years hence than they have to-day:

1. All the traditions of the existing high school are opposed to manual training. The manual elements did not enter into the education of the teachers, and it is perfectly natural that they should lightly value a training they have never had themselves, which they have never felt the need of, and which as they think has no place in a liberal education. All high school teachers do not feel thus, but many of them, perhaps a majority of them, do.

We have no right to complain of these teachers. If they have the courage of their convictions, they will speak out and they will belittle the manual features. We must give them time; wisdom and judgment are

matters of growth, and none of us stood where we now stand twenty years or even ten years ago. But meanwhile, if we would give the new ideas a fair chance for healthy vigorous growth, we must plant them in a new field aloof from the blighting winds of a contemptuous scorn and the clouds of a haughty indifference.

2. The programs are all against manual training. One principal says: "I am in favor of manual training, but every pupil must have his five recitations first. The boys who wish to have manual training can take it after school." Another principal insists upon four recitations, or perhaps only three, but they must follow the old order and the manual features are always to be secondary. They are the first to be cut off and omitted on special occasions.

In some cases, principals refuse to admit one's standing in shop and drawing as elements of scholarship in awarding class honors. The standards which ordinary high school pupils must reach, if they are to go into higher education, fail to recognize manual training, beyond a possible requirement of a feeble amount of geometrical drawing. This neglect has a tendency to depreciate manual training in the minds of students. Again, in some schools a failure in mathematics or history debars one from the day's exercise in shop; and so on. These evils do not exist in all schools, nor do all of them exist in any school, but they are far too common and they affect manual training pupils unfavorably.

3. Even when the disposition of teachers and the arrangement of the programs is all that one could ask, the manual training sections of a general high

school are exposed inevitably to unfavorable influences. The full manual training school program covers more hours per day than the ordinary academic program,—at least it ought to, even if it does not. The result is that every day manual training students are exposed to peculiar trials and temptations. When other students take their traps and march out of school for a hot dinner at home or an hour's recreation, the manual student must keep on an hour longer at his mathematics, science, literature, drawing, or shop. Of course if he is zealous and high-minded, he can stand the daily trial, (or, rather, it is no trial to him,) but the contrast is in general unfavorable and it works against the success of the manual course. In the independent school, all the pupils have the same extent of program and all are dismissed at the same time. It matters not if a different hour of dismissal obtains at another school, here there is uniformity and the pupils think nothing about it.

4. There is a concentration of interest in a school where there is a single course of study. Boston is wise in differentiating its high schools. The classical school is by itself. The interests of all its pupils are focussed upon Latin, Greek, and mathematics. The pupils have a common interest and their conversation out of hours is on subjects common to all. There is no tendency to reopen questions of choice. The enthusiasm of one fires the enthusiasm of all his associates, for their studies are all the same.

In a school with a variety of courses, the case is very different. The zeal of one is very apt to quench the ardor of another, for it is in a different field. Boys are prone to think other studies more interesting, or

more profitable, or easier than they find theirs. This daily association of students in different courses of study is demoralizing. This evil exists in colleges to a far greater extent than is generally known, and it explains partly the superior excellence of those schools which stand apart and devote themselves exclusively to single courses of study. Hence, I say, if your community is large enough to admit of it, let your high school work be differentiated into different schools, not on a geographical basis, but according to their curricula.

5. There is another reason for the independent organization of the manual training school which I base, not on observation, but on my knowledge of human nature. If we were all gifted with angelic dispositions and unerring judgments, this reason would have no force. When manual training is made a sort of annex to the high school and not incorporated as a coördinate and integral part of it, there is a divided responsibility in the care and education of a certain number of pupils. During certain hours pupils are under the direction of one person, during other hours under another. Any unusual demand, and there always are a good many such, trenches on somebody, for the off hours may be a common battle ground.¹

Then all the advanced drawing, geometry, mechan-

¹ I know of an instance where a city superintendent seriously proposes that the boys of his high school shall spend five hours every forenoon in the high school, on a special course of study, and five hours every afternoon in a factory learning to make guns under a management outside the public schools. Through some strange misapprehension, honest men have been led to believe that a gun factory is a manual training school. In my judgment such a scheme would not last six months.

ics, physics, and chemistry should be consciously coördinated with the shopwork to secure the best results, and hence I say they should all be under the direction of one head. Many of our most valuable high school principals feel unable to assume charge of the manual features and would prefer to leave the care of such entirely to a superintendent.

On the other hand, the shop superintendent, if he is a well educated man, (and of course he should be,) is liable to feel that the most is not made of his department. I doubt if one could find a superintendent who does not cherish the hope (more or less defined) of some day having the whole charge of the entire work of those pupils who come to him. It is easy to point out instances where this divided responsibility exists without any apparent drawback. I suspect that they would after all be found to be only exceptions which prove the rule.

I have thus given five good reasons for a separate organization. A reason for the opposite course would exist in the matter of cost, provided the manual work was relatively small and the students were gathered from different grades. I am not thinking of such scattered divisions, nor of classes made up almost entirely of volunteers from classes already in high schools. I am not planning for those students who are engaged in fitting for classical colleges, and who can spare time for but a single shop exercise per week. If possible, let such students have a shop in their own high school. I have in mind a school of several hundred pupils of both sexes, who are to have an exercise in shop or drawing, or in both, every school day. When these attend in fair proportion, there will be found to be no

essential difference in cost between the two methods of organization.

III. ADMISSION TO THE MANUAL HIGH SCHOOL.

I assume, therefore, that the city manual training school will be an independent institution standing on its own ample lot of ground and under its own principal and corps of teachers.

What students are to be admitted? It will admit substantially those of high school grade, or at any rate it will refuse to admit pupils under fourteen years of age. Pupils completing the district or grammar schools should enter on certificate, making a deliberate choice between the old and the new high school.

It will be observed that I do not advise any interference with the existing high school. I suggest no change in its course of study, no diminished appropriation. I ask only that the new school be well equipped and that the two be placed on the same footing, equally appealing to grammar pupils. No student can take all the training offered in both schools. Do not delude yourself by the notion that, by some eight-hour program at school and four-hours' study at home, a student can do it all. Healthy growth in clear knowledge and mental power does not come from such a forcing process. So, let the pupils choose. Give the two schools an equal chance to live, and let both or the fittest survive. In the manual training high school, pupils should enter at once upon a three years' course of study. But not the diploma pupils alone. I suggest that all applicants not less than 15 years old should be admitted, provided that they are not mentally or morally deficient and provided they

can be grouped in sections of from eighteen to twenty-five members each. These latter admissions, which are assumed to exhibit a somewhat inferior grade of scholarship, should enter upon the same course of shop-work and drawing as the other pupils; but their academic work would of necessity be of slightly lower grade and they would not aim to cover an equally extensive course. In such a school, pupils would freely pass from one division to another, as their rate of progress admitted or required transfer.

It will be seen that I am thus providing for the admission of pupils who under existing arrangements never get into the high school at all. I am taking account of persons whose development has been retarded, and of those whom Mr. Harris used to call "clinkers," for they always get sifted out of the promoted class. They are dull and unscholarly according to ordinary school standards, and for that very reason they stand in greater need of manual training. While manual training may not have for them an absolute value, equal to what it has for the brighter and better trained minds, its relative value may be greater. Hence, I say they have great need of manual training and they ought to be allowed to get it under the most favorable auspices.

IV. THE CURRICULUM.

Now what shall be the curriculum of the manual training school? This subject has been fully discussed elsewhere and by many writers. I shall therefore be brief and use no argument.¹

¹ For a statement of "General Principles" to be followed in drawing up a course of study for any grade of a public school, I

1. The shop training in tools, materials, and processes, should occupy every pupil in the school not more than ten and not less than six hours per week, under the immediate care and direction of a competent teacher. The shop mottoes should be "Instruction not Construction," "Accuracy and Intelligence rather than Speed and Authority."

2. The drawing should occupy not more than five and not less than three full hours per week. It should be both free-hand and instrumental. The methods of using pen, pencil, and brush should be broadly studied and, though the school should not strive to be an art school, it should among other ends lead up to the artistic stage.

3. There should be a daily exercise in pure or applied mathematics.

4. There should be a daily exercise in science with a great deal of individual laboratory work, with notebook and pencil in hand.

5. There should be from five to eight hours a week in literature, including practical rhetoric, grammar, (English, Latin, French, or German,) history, civics, and reading standard authors.

Throughout the course, quality rather than quantity should be considered; the judgment rather than memory should be cultivated; and use rather than ornament should guide.

refer, with my most emphatic endorsement, to the report presented to the New-England Association of School Superintendents last year by Messrs. Balliet, Meleney, and Aldrich, and written I believe by Supt. T. M. Balliet of Springfield, Mass. I wish that report could be made the basis of a curriculum for all the grades, worked out with the greatest care and sent out by the Bureau of Education to every superintendent and school board in the United States.

The standard to be reached for those who go forward into higher education should be scientific and technical, rather than literary.

I should like to dwell upon the peculiar function of the teacher of shop work and the methods he may use, but my allowance of time will not permit.

V. THE ARRANGEMENT OF ROOMS, SHOPS, &c.

These matters are far more important than one at first would suppose. Let me speak dogmatically from considerable experience.

1. If possible, let the shops be grouped in a separate building, at least fifty feet from recitation-room windows and with their noisest windows facing away from the main building.

2. Let the passage way to the shop building be covered and, if the buildings are more than two stories high, let there be a bridge across at the third story floor.

3. A shop divisions should not contain more than twenty-five students. In machine metal-work twenty are enough.

4. A shop for twenty-five students should contain about 1600 square feet of floor; be lighted by windows running flush to the ceiling; and the methods of transmitting power should be such that a shop teacher can stop all shafting in his room, without interfering with any other shop.

5. Every shop should have a black-board, and there should be means for readily seating a class in front of the teacher while he gives his preliminary lecture and illustration of method.

6. Every shop should have in close connection its own wardrobe and lavatory for class use.

7. No room should be used as a recitation room or drawing room which has shafting attached to the underside of its floor joists.

8. Chemical laboratories should be in the topmost story.

9. Physical laboratories should be furnished with tools and power.

10. Each shop teacher can teach six hours daily. He should be held responsible for the tools of his shop and for the order and discipline of his classes. He should keep records of attendance and proficiency and should preserve all class exercises for such uses as the school may require.

11. Every student should leave his bench, forge, or machine in a perfectly clean normal condition and put every tool and appliance in its proper place; but all the menial work of the shop should be done by a janitor.

12. Every shop teacher should be a fair draftsman and a good mathematician, and he should know a good deal more of practical mechanics than he is expected to teach.

13. Girls should take the full course of drawing, a course of light wood-work, (including joinery, turning, and carving,) for which a special shop should be provided; a course in kitchen chemistry, supplementary to their general practical chemistry; and a course in needle work and embroidery, to be known as the "Department of Domestic Economy."

14. A manual training school needs as many teachers as it has working divisions. A school of

three hundred pupils needs a principal and twelve assistants.

15. The number of shops or work rooms depends on the length of work periods, and the number per week. If tool work covers two hours daily, then a shop is needed for every sixty or seventy pupils. A drawing room is needed for every one hundred fifty pupils.

16. The principal should be equally at home in all parts of the curriculum. He should never say, as I heard of a principal's saying the other day to a visitor, "I don't take much stock in this subject, but I am obliged to keep it up;"—and his pupils heard him say it!

Such, in very brief, are the outlines of an organization suited to a city of 50,000 or perhaps 25,000 people. When you count up the cost, you will find it rather expensive; but the tax payers will not object. They will find it worth the price; for, aside from its direct value, it will stimulate your grammar schools, as nothing else can stimulate them.

DISCUSSION.

MR. BENJAMIN BAKER, Superintendent of Schools, Newport, R. I., followed in the discussion of Prof. Woodward's theme. He said:

Newport has no manual training school, although, several years ago, such a school was conducted as a private enterprise. A girls' industrial school existed in that place, supported at a yearly expense of \$3,200, where cooking, dressmaking, millinery, sewing, embroidery, and laundry work could be taught, although

there is little demand for some of these subjects at present.

The city of Newport has, however, a fund and real estate to the value of about \$30,000 for the support of a manual training school, if a suitable building can be erected.

I agree with Prof. Woodward, that it is best to differentiate the departments of secondary schools, if it is possible to do so. A large city should have a girls' high school, a classical high school, a literary and commercial high school, and a scientific and manual training school.

A girl of high school age requires a different education from a boy of the same grade. Boys in secondary schools should receive an education somewhat adapted to their future needs.

As a digression, I would say, that it is commonly assumed, that, as girls need manual training, they must get it by working in metal or wood. The truth is that girls get more manual training than boys; for the former sew, knit, crochet, work in lace, and do fancy work, much of which may appear to be useless from a practical point of view, but is really in line with the objects of manual training, for it disciplines the eye and hand. Work in metal and wood would, however, train and strengthen muscle and thus contribute to the health of girls.

The process of differentiation cannot be applied in small cities. The expense would be too great; tax payers would object. In such places, the advantages of manual training must not be lost.

If a small city has no high school edifice and is about to build one, such a building should be arranged

and equipped to include a classical school, an English and commercial school, and a scientific and manual training school.

Should the city afterwards outgrow the accommodations thus afforded, the classical and English departments may be removed to another building.

There are a great many small places, already provided with high school accommodations, not adapted to manual training.

A majority of these places have large grounds, on which a shop may be erected at small expense, where wood-work may be done. Perhaps the Sloyd can with profit be introduced into such schools. Recess in the yard may be abandoned, and the time given to physical exercise or to manual training. The latter ought not to be neglected.

A manual training school is really a school of applied science. In science, we recognize the department which treats of the mass, the department which treats of the molecule, and the department which treats of the atom. It would be best, therefore, to consider manual training as a part of a course in applied science.

Such a course should be progressive: industrial training, the handling of the mass, should come first, and be preparatory to the application of the principles which relate to the molecule, embracing heat, light, electricity, and sound; last, should come the practice in a chemical laboratory, work involving the atom. The skill acquired in manual training would be of great use in the laboratories. Instead of speaking of a manual training school, it is better to speak of manual training in schools.

Political economy names the three great processes by which changes are affected in matter: transmutation, an elementary change; transformation, a change of form; and transportation, a change in the position of the mass.

Mechanical pursuits deal with transformation, a change of form which gives value to a mass originally valueless, or increases the value of the mass by that change of form. Hence, manual training, which looks toward industrial pursuits, deals with form, and form suggests mathematics and drawing, so that these two branches are fundamental in this kind of discipline. Drawing especially, from its relation to form, must never be omitted.

I have no objections to offer to the curriculum as planned by Prof. Woodward. I would, however, lay stress upon literary studies in manual training schools. Science, mathematics, and industrial training do not and cannot give culture in the technical sense. I would, therefore, have a broad and deep study of literature in such schools, to counteract the materialistic tendencies of the other work.

In conclusion, this kind of training is to be a powerful factor in education, for it comprehends in its discipline nearly all the powers and faculties of man. It demands of a pupil, that he examine some very useful article with the utmost care, in order to learn everything about its form and utility. This will tax his patience, his perseverance, his attention, and his industry, and in addition will train his will and his powers of perception and observation. He will then make use of the universal language, drawing, to express the form. Next, he will work out the idea in

iron, wood, or some other material. The reasoning power is cultivated, the will strengthened, and the judgment trained, so that manual training contemplates the cultivation of muscle, nerve, eye, mind, and will.

XI.

THE EDUCATION OF THE WILL.

BY REV. WILLIAM DEWITT HYDE, D. D., PRESIDENT OF
BOWDOIN COLLEGE, BRUNSWICK, MAINE.

There are two ways by which we may try to make boys and girls do right. One way is to fill the mind with rules. The other way is to train the will into habits. Of these two ways, the first is the easiest for the teacher. You have only to give the boy the rule, make him learn it, and hear him recite it. You can teach a whole class at a time, if you call that teaching. You can "go over" the whole ground. You can show definite results on examination. You can give precise rank, to the second decimal. The only fault with this way of teaching is that it fails to make the boys and girls any better. It does not get at them. They forget your rules; or they do not apply them to the right cases; or they lug them in where they are not needed, and so become prigs and prudes; or it makes them morbid, stifles spontaneity, and inclines them to be forever pulling up the roots of their moral lives to see how they are growing, and keeps them fingering the delicate fibres of virtue so constantly that they have no chance of healthy growth at all. Strong, vigorous character does not grow in this hot-house air. You cannot force it by these artificial processes.

The second way is to train the will in habits, a

much harder thing to do. There is no text-book on the subject, and it is impossible to write one. You cannot call up a whole class at a time and hear them recite on it. You cannot give out the lesson in advance and fix the time when it shall be learned. You cannot give an examination in it. You cannot mark on it or give rank.

Yet the results of this training go deeper than any lesson that can be taught out of a book. They abide in the structure of the scholar's thought and purpose, long after every proposition he ever repeated to you has faded from his memory. They determine the stand he shall take in every practical concern of life, years after rank-books have vanished in smoke and ashes. They enter into and constitute the life and character of the man or woman that is to be.

The recent revolution in education may be most concisely characterized by saying that it puts ability to perform processes above capacity to remember statements and formulas. The test of spelling and grammar is no longer: "Can you recite this column of long words, spelling and defining them in order, and repeat the rules of syntax?" but: "Can you write a sentence that conveys clearly your precise meaning to the reader?" In geography, the question is not: "Can you recite by rote the boundaries of states and nations and repeat verbatim the descriptions in the text-book?" but: "Can you draw the map, tell me what we get from the country, describe what you would see if you were there, and show what route you would take to go there?" History no longer consists in the remembering of dates and names and places, but in the ability to read the character and tell the

story and reproduce the scenes in which men like ourselves acted out the same human nature that is in us. Science is an affair, not of memorized descriptions, but of experiments witnessed, performed, explained, and understood.

Now that in every other department of education we are insisting on doing rather than committing to memory, in this day of the kindergarten and manual training, it is high time for us to give to the teaching of morality the advantage of the same real and practical method which Aristotle claimed for it in his *Ethics* more than two thousand years ago. He says in the opening sentences of his second book: "We acquire the virtues by doing the acts, as is the case with the arts too. We learn an art by doing that which we wish to do when we have learned it; we become builders by building, and harpers by harping. And so, by doing just acts we become just, and by doing acts of temperance and courage we become temperate and courageous. Both virtues and vices result from and are formed by the same acts, in which they manifest themselves, as is the case with the arts also. It is by building that good builders and bad builders alike are produced; by building well they will become good builders, and bad builders by building badly. It is by our conduct in our intercourse with other men that we become just or unjust. So, too, with our animal appetites and the passion of anger; for, by behaving in this way or in that on the occasions with which these passions are concerned, some become temperate and gentle, and others profligate and ill-tempered. In a word, the several habits or characters are formed by the same kind of acts as those which they produce.

Hence, we ought to make sure that our acts be of a certain kind; for the resulting character varies as they vary. It makes no small difference, therefore, whether a man be trained from his youth up in this way or in that, but a great difference, or rather all the difference."

The best field for this education of the will is in the home. For there life is most simple and real; contact is most intimate; and desires and passions express themselves with least restraint. Next to the home comes the school. Next to father and mother stands the teacher. The pastor, the Sunday-school teacher, the employer, the writer, the lecturer may each do something in this moral training. But the teacher has the best chance of them all, if he only has the will and the skill to use it. Other work may be more showy and undertake to do things on a grander scale; but the solid hand-to-hand work that tells upon character must be done in the home and in the school, if it is to be done at all.

The education of the will cannot be introduced into the curriculum as a new requirement. It must be entirely free and unconstrained. Unless the impulse to do it is already in the teacher's heart, no enactment of the school committee can put it into the school. I cannot tell you how to do it here to-day. You must work it out for yourselves as opportunities present themselves. I can simply call your attention to its importance and indicate some very general lines on which you can proceed.

In the first place, breaking a child's will is not the way to educate it, any more than breaking a stick is the way to bend it. When it is once broken, there is

nothing left to bend. It is never right, whether at home or at school, to make a child give in through mere terror. Education presupposes sympathy. Terror kills sympathy. The parent or teacher who makes a child afraid of him puts that child out of his reach. It becomes forever impossible for that parent or teacher to educate that child. He may force him to recite lessons and compel him to obey commands. But that confidential leading of mind and will into larger fields and wiser ways, in which true education consists, is utterly impossible. A rule maintained by terror is a reign of death, whether in home, or school, or state.

Shall punishment then be abandoned? By no means. If teachers could be trusted to administer it wisely, even severe corporal punishment would be a wholesome discipline in many of our schools. The important thing is, not what kind of punishment is employed, but the spirit in which it is administered. Punishment that is arbitrary, hasty, angry, and inflicted with the purpose of frightening a child into obedience is always injurious and wicked. It does not draw the will out of its waywardness and lead it to more reasonable and righteous resolutions: it drives the will back into the child and confirms it in its perversity. The somewhat sentimental reaction against corporal punishment in our day has its justification in the desire to avoid the horrible barbarities of this bullying and terrorizing spirit which was the characteristic mark of the oldtime schoolmaster. It is an attempt to turn out the master and tyrant and bring in the teacher and guide.

The aim of punishment is not to weaken but to

strengthen the will. It inclines the will to the right choice by rendering the evil alternative undesirable. Blame and punishment bring home to the wrong-doer the inherent wrongfulness of his deed in terms of his immediate personal interest. Punishment makes him feel as well as know the badness of bad conduct. Punishment should always be inflicted with a view to the strengthening of the will in righteousness. Punishment and reproof should not drive the evil in by suppressing its outward manifestation, but should draw the will out of the evil by making it unpleasant, and toward the right by making that attractive. Punishment thus administered will not drive the pupil away from you in hatred and rebellion. It will draw him to you in respect and confidence.

Education by punishment, however, is the negative aspect of the education of the will. The positive education of the will consists in training pupils to do whatever they do in the way that it ought to be done, until the right way becomes habitual, natural, and preferable. The approval of the teacher is the incentive to this right way at the outset. The approval of the pupil himself is the ultimate reward.

Morality is not a thing apart from life and work. Morality is right-living and well-doing. True moral education then is not an abstraction. It cannot be effectually presented to young children in systematic form. It must be particular and concrete. It must deal with the concrete details of the child's daily life. The young child cannot be taught the nature of the *summum bonum*, the ground of moral obligation, the intricacies of the hedonistic calculus, the contradictions of the hedonistic paradox, the authority of the

categorical imperative, the distinctions between the desired and the desirable, the evolution of the moral ideal.

But he can be made ashamed to tell a lie. He can be made to suffer himself, when he has treated a play-mate unkindly. He can be made to know how it feels to smart himself, when he has been cruel to a weaker child or an animal. He can be trained to be considerate of the rights and interests of his playmates. He can be taught to appreciate how much his father and mother are doing for him. He can be habituated to making sacrifices for others. He can learn to devote work and time and money to social ends. He can learn to treat equals with justice, inferiors with compassion, superiors with reverence. He can form the habit of cherishing patriotic feelings, reciting patriotic speeches, participating in patriotic exercises. He can accustom himself to an attitude of devotion in the presence of that Infinite Author of all good in whom we live and move and have our being. To induce these habits of right-living and well-doing in the concrete relations of every-day life: this is the task of moral education. Habituation to right conduct is the secret of the education of the will.

As it is impossible to cover the whole ground of moral education, I will by way of illustration confine myself to a single aspect of life, the virtues of work. For intellectual work is the chief business of the school, and consequently the most important application of morality to school life is the right doing of school work.

The virtues of work are the foundation of all right living. The man who does his work well, to that ex-

tent and on that side of his life, must be a good man. Bad work betrays weakness of will and corrupts the whole nature. This is the gospel Carlyle tried so bravely to teach the world. "This is the ineradicable, forever-enduring gospel: work, and therein have well-being. All true work is sacred; in all true work, were it but true hand-labor, there is something of divineness. Labor, wide as the earth, has its summit in heaven. . Produce! produce! were it but the pitifullest infinitesimal fraction of a product, produce it in God's name! 'T is the utmost thou hast in thee; out with it, then. Up, up! whatsoever thy hand findeth to do, do it with thy whole might. Work, while it is called to-day; for the night cometh, wherein no man can work. . Two men I honor, and no third. First, the toil-worn craftsman, that with earth-made implement laboriously conquers the earth and makes her man's. . Toil on, toil on; thou art in thy duty, be out of it who may; thou toilest for the altogether indispensable, for daily bread. A second man I honor, and still more highly: him who is seen toiling for the spiritually indispensable, not daily bread, but the bread of life. Is not he too in his duty? . If the poor and humble toil that we have food, must not the high and glorious toil for him in return, that he have light, have guidance, freedom, immortality? These two, in all their degrees, I honor; all else is chaff and dust, which let the wind blow whither it listeth."

To the same effect is the teaching of Ruskin: "If your work is first with you and your fee second, work is your master and the lord of work, who is God. But if your fee is first with you and your work second, fee is your master and the lord of fee, who is the devil.

So there, you have it in briefest terms : Work first—you are God's servants ; Fee first—you are the fiend's."

So George Eliot, sorrowful as she makes you for the vanity of human lives and the emptiness of the average human heart, still makes the man who does good honest work and who finds his joy in doing it stand unshaken by the tempests of passion and temptation and come out unscathed from the searching flames of her merciless analysis of motive. Adam Bede and Caleb Garth stand forth as pillars of the social order, when everything else gives way and comes to naught.

The best moral training a school can impart to its scholars is the habit of doing work well, for the pride they take in it and the love they have for it. A child who acquires that habit has a better start in the moral life than one who can repeat from beginning to end the best catechism of religious doctrine or text-book of moral science ever promulgated by council or compiled by man. For memory is but one of many faculties of man, while habit and will are the man itself.

The first virtue of work is punctuality, the habit of doing work at the right time and having it ready when it is wanted. Not only tardiness in coming to school, but the habit of putting off lessons until a few minutes before the time of recitation, should be sharply rebuked by the teacher. The scholar should be taught that no good work can be done in a hurry, and should be encouraged to begin his tasks early enough to allow plenty of time for their performance. A good way to impress this duty upon the scholar's mind, and at the same time train him in habits of forethought, is to require him to draw up a table, show-

ing the hours when his lessons command the time which he proposes to devote to each.

The second virtue of work is orderliness. And right here let me say that by work I mean doing something. Unless the teacher gives the scholars something more to do than merely to recite lessons from the book, there is no real work for the scholar to do; and hence, it is idle to talk of his acquiring the virtues of work. I assume that I am addressing teachers who require their scholars to work over and appropriate every thing they learn, and to present it in their own ways. Examples handed in on paper or performed on the board should be judged, not merely by the answer, but by the way the answer is obtained. Each step in the process should stand out clearly in its proper place. The fundamental characteristic of all truth is perfect orderliness. The scholar should be trained to reproduce that orderliness in every process that he performs. In his diagrams and analyses of sentences, this cardinal principle of work may be still further applied. And in the analysis of flowers and the description of natural objects, order should be made of prime importance. And in constructive work, such as composition and drawing, in gymnastics and all manual work, order and form can be shown to make the whole difference between good work and bad.

Neatness is a virtue closely akin to orderliness. Orderliness arranges the necessary materials in right relations to each other. Neatness rigidly excludes everything that is not necessary. It demands that there shall not be a mark, or a scratch, or a spot, or a smirch on the paper on which an example is performed or a sentence written. It begins every task with a clean slate,

and lets nothing come onto it, except the precise lines and marks essential to the process to be performed.

Another virtue of work is concentration. Concentration is conscious and intensified attention. Nothing weakens the mind and saps the virtues of work so much as dawdling over one's books. On this account, as indeed for every reason, the teacher should avoid, as he would the plague, the habit of merely giving out a lesson to be learned from the book. This shiftless habit of saying to a class, "For the next lesson you may take from the top of page twenty-four to the bottom of page twenty-seven," is responsible for half the shiftlessness, inattention, and dawdling that marks the study hours in so many of our schools. It is impossible to concentrate the mind on an unknown quantity or set about acquiring the contents of pages twenty-four to twenty-seven inclusive with enthusiasm. The teacher should give at the close of the lesson a brief outline of the main points in the next, calculated to awaken interest and curiosity. In connection with the lesson, there should be some exercises to be performed, embodying the principles and applying the facts contained in it. The will is the active nature of man. And you cannot bring the will into exercise, unless you give it something definite to do.

Mere memory is too largely passive and receptive to bring the will into full activity. Concentration and attention are virtues which cannot be developed in pitchers and bushel baskets.

Another virtue of work is perseverance. Good work is hard at first. Its many blunders must be corrected. Many spoiled efforts must be abandoned. Many blotted and disfigured sheets of paper must be

torn up. Many bungling processes must be done over again. In the mean time attention flags. Interest wanes. Enthusiasm dies. Then the teacher's encouragement is needed. The scholar must be told to "try, try again." He must never be allowed to give up. The word "impossible" and its synonym "I can't" must be stricken from his vocabulary. His pride, his pluck, his obstinacy, every reserve in his nature must be called into action. He must learn the joy of victory and feel the glory of a conqueror.

The comprehensive and crowning virtue of work is thoroughness. The scholar must be taught to do his best. And he must be trained constantly to compare his best with *the* best. Absolute rather than relative excellence should be the aim. It is not of the slightest consequence whether he can do better than his neighbor. It is of supreme consequence that he form the habit of doing whatever he does as well as he can do it. The teacher should never accept anything below the level of a scholar's highest possible attainment. The best or nothing should be the rule. Here again I am referring, not to lessons recited, but to work done. I refer, not to the contingencies of so capricious a faculty as memory, but to such qualities as accuracy of statement, neatness and orderliness of presentation, faithfulness of study, precision of observation.

In order to develop these virtues of work in the scholar, there must be more real work done in the school. The scholar must take a more active and aggressive attitude toward his studies. Manual training is an important step in this direction. But the principle which underlies manual training, that we

learn by doing and not otherwise, must be applied to every study taught in the school. A lesson which cannot be put in practice, a lesson which cannot be made the basis of an exercise calling for the reaction of the scholar's mind upon it in a definite, original, and practical way, is not a fit lesson to be taught in school. And the teacher who has not sufficient energy, invention, and enterprise to translate the subjects he teaches into exercises is not fit to be a teacher.

The next step forward in public school education, a step which many teachers are taking already, is this substitution of active exercise for passive receptivity. The chief obstacle to this reform is the bugbear of examination. Examination as generally conducted to-day, is educationally a blunder, psychologically an absurdity, morally an injustice. It tests, not ability to work, but capacity to cram. It puts the premium, not on quality of work quietly done throughout the term, but on quantity of memorizing crowded into its closing hours. A final examination, as such examinations are generally conducted, is no fair test of either teacher, school, or scholar.

The work done in exercises connected with daily lessons should be kept on file in every school. The inspection of that work should be an important part of the examination of the school and of the individual scholars. The knowledge that their work is to be submitted to inspection, and that their standing and promotion will in a great measure depend upon it, will lead them to do their work promptly, systematically, neatly, and thoroughly. It will train them to work and teach them the virtues of work. Work done thus in quietness, taking all the time that is necessary,

is free from that anxiety and worry which is the bane of the hurried cram for examination. The method which rests everything on a final examination, on what the scholar can remember of a whole term's work, encourages superficiality, haste, sham, artifice, confusion, which are the vices of work. Teachers, let us require of our scholars more active work and less passive absorption. Superintendents, we look to you for such examination as shall give to the evidence of faithful work throughout the term at least as much significance, as to the hurried sentences transferred to an examination paper in the flurry of excitement following a period of unnatural strain. Then, will our schools become educators in habits of thoroughness and integrity, which are the virtues of all work and the foundation of all character, instead of nurseries of rivalry and show, which are the vices of the lazy and pretentious and are the ruin of character.

The test of a man's education is the quality of work that he can do, not the quantity of information that he can remember. Mere memorized information in the mind of the scholar is as worthless as undigested food in the stomach of an athlete. The development of strong intellectual muscles and steady moral nerves is the end and aim of education.

The criticisms that have been passed upon our public schools, so far as they are just, are all directed against the one-sided education which sacrifices bodily health and moral character to the single end of acquiring a maximum of memorized information. If that were the only conception of the mission of the school, it would have formidable educational rivals in the wild life of nature, the rough-and-tumble experience

of business, the reverent atmosphere of the parochial school. Better citizens and artisans and Christians could be trained by these agencies, than in schools devoted to the passive reception and retention of undigested and unassimilated information.

The school should be an intellectual workshop in which the virtues of good, hard, honest work are taught by experience, and where pupils are trained in those habits which are essential to good workmanship. The habit of doing one's work well is not the whole of morality. But it is the heart and core of morality. Without it, no combination of other virtues can give to character solidity and strength. On this as a foundation, all other virtues may be securely laid. This ability to do work honestly and well for the love of it, not for the fame or pay it brings, is the one thing needful in our industrial and social life. For the supply of this deficiency, we must look to the training given in our public schools.

Train the pupils in these schools to do the work there given them to do, with promptness, neatness, and order, with all their might and to the best of their ability; and you will do your part towards fitting them for any sphere of life, making them ready to take hold of any kind of honest work, and qualifying them to assume the duties and responsibilities of membership in the social and industrial order and of citizenship in church and state.

DISCUSSION.

THOMAS M. BALLIET, PH. D., Superintendent of Schools, Springfield, Mass., opened the discussion of President Hyde's address. He said:

I heartily endorse all of President Hyde's paper. Work is the most effective means of training the will; it is a means of grace and not a curse. I wish, however, to supplement the paper by dwelling a few moments on points not touched upon.

1. The results of recent investigations in physiological psychology show that there is a direct connection between "will" and the brain and, through it, the muscular system. Flabby muscles and weak will have a relation to each other of cause and effect. The discovery of motor centers in the brain has revolutionized scientific thought on the subject of physical education, and it will revolutionize thought on the subject of moral training. It has proved that moral training cannot ignore the body; that physical training, which develops the motor centers of the brain, at the same time lays the basis for strength of will and force of character. Hence, all properly conducted physical education is at the same time a training of the will.

2. The close connection between muscle and mind just mentioned shows that manual training has a value, beyond its intellectual and practical value, as a means of training the will. The thorough mastery of the muscles of the body which skilled manual labor develops goes far toward giving the boy the self-control that bridles passion and makes him a man *propositi tenax*.

3. All military drill is valuable for similar reasons, as a means of developing will power. More especially, however, is it valuable in that it trains the person into habits of *prompt physical obedience*, from which there is not a very long step to the obedience to moral law which leads to true moral freedom.

Then, too, the bearing of body which military drill develops has a direct influence on character and will. No man can ask for alms as a beggar with good bearing and "active chest," and no one with a "passive chest" has the courage to face bayonets. A man of poor physical development is unfit for the army, not simply because he cannot endure the hardships of the camp, but also because he has not the courage to fight battles.

4. Physiological psychology has taught us that the *idea*, or mental image, of a muscular act is not a "purely intellectual element," wholly apart from the act, but that it is *the first part of the act*. Whether all thought involves incipient muscular activity may be conceded to be an open question; but that the thought, or mental image, of an act is the first step in the act is beyond doubt. Hence, the mere intellectual contemplation of conduct, right or wrong, is an integral part of conduct, and a man may gradually undermine his character by harboring forbidden thoughts without committing a single overt wrong act.

From this, it follows that there is a far closer connection between "intellect" and "will" than the traditional psychology knew; and the traditional divorcement of intellectual and moral education, which this psychology used to concede to be possible, if it did deplore it, is seen to be absurd. All right intellectual education has a moral value.

It is also evident from the above that it is a serious mistake to hold up wrong conduct before the minds of children as a means of teaching right conduct. If thinking a wrong act is so far forth *doing* it, then this mode of teaching morals would consist of getting

children to do wrong (incipiently), for the sake of learning to do right. To this surely St. Paul would have said: "God forbid." Our school readers err seriously in this one respect. They generally give more examples of wrong conduct than of right conduct, and often suggest forms of wrong doing of which the children would not otherwise think for years to come, not until such wrong doing would have lost its fascination for them. We ought to have expurgated editions of our school readers. We need not quibble here about the question as to whether it is never allowable to hold up wrong conduct as a means of deterring. No one would go to the extreme of maintaining this; but all our pedagogic sins thus far have been on the other side. Let us depend more on the attractive power of virtue, than we have in the past. To think of vice is a very poor way of acquiring a love of virtue. I fear, if sin had not entered the world, some teachers would not know where to find means of moral development, a thing necessary, theologians tell us, even under those circumstances. Let us stop trying to cast out "by Beelzebub." Let our teaching of morals be positive, instead of negative.

PROF. PAUL H. HANUS, Assistant Professor of the History and Art of Teaching, Harvard University, Cambridge, Mass., continued the discussion of President Hyde's subject. He said:

I feel very much like that individual who came "last of all," and who, when asked whence he came, replied: "From going to and fro in the earth and walking up and down in it." I am in a transition state, having just separated from the old associations

of my western home and feeling the strangeness and new life of a changed environment. So I came here to listen and to get acquainted. Thus far I have prospered in my intentions. I should fail to appreciate the courtesy of your determined President, however, and appear to be unmoved by the inspiration of this session and its glorious surroundings, if I should refuse to add a word to the discussion of the valuable paper we have just heard.

The training of the will of course means moral training. It is well to consider that we do not mean the training of an independent faculty, when we talk about training the will. Like all other phenomena, volitions have causes, antecedent phenomena, without which they are impossible. So it happens that the training of the will must first seek these causes in action, must determine the incentives which precede execution. It is then our privilege and our duty to enable our pupils to *know* the right, to *feel* the right,—*i. e.*, the consequences of right actions,—and to *do* the right. The barrenness of rules and precepts, unattended by feeling of consequences and unpractised, was well brought out in the paper.

To know the right involves the due appreciation of a range of ideals that may serve as motives to action. These ideals it is the teacher's function to furnish. Volition follows upon desire, and desire is awakened only when a thing is known and appreciated. Then, if we can show the possibility of attainment, action naturally follows. These ideals then must be clearly grasped, not in the abstract, but as very concrete things. The joy of intellectual achieve-

ment has often been dwelt upon, and the value of the realization of something accomplished, something done, very distinctly recognized as a stimulus and an incentive to renewed exertion. Just so it is essential that, in moral training, the satisfaction of a realized intention be felt, in order that spontaneous activity in a given direction may follow. The absence of incentives to right doing is often a potent cause of arrested moral development. The presence of high ideals without habitual effort to realize them makes vacillating character. We need then, not only to know what incentives are to be developed, and how they are to be brought home to the mind of the child, but we need to know how to train intention into action and actions into habits. "We live by admiration, hope, and love," and in that fact we find our guide to incentives, if skill only attend our efforts in presentation.

For this skill and for the recognition and development of *potent* moral ideals, we need to study the child. The study of children, by the way, is a topic I have not heard alluded to during the sessions of the Institute. The paramount importance of such study is beginning to be felt, and much attention, as you know, is now devoted to methods by which the best results shall be attained. We need to know the rationale of the whole range of phenomena, from interested attention on the part of the child to ideals placed before him, to the accomplishment of volitions based upon them. It is easy for every teacher whose heart is in his work to develop ways of studying the children under his care. The effect upon the teacher of habitual careful study of the acts of children, with

their causes and accompanying conditions, cannot be overestimated.

Consider how easy this inquiry is in a somewhat different part of the field of investigation. By the assignment of a given task, say the solution of an average problem or the memorizing of a given selection, it would be easy for the teacher to discover capacities as a function of time by simple observation. Similarly when pupils have been induced to think and to do the right thing under normal conditions, but under more or less difficult circumstances, the careful teacher may find and discriminate the effective motives from others, and note the conditions most favorable to execution. Such study, systematically undertaken and continued for a long time, followed by a systematic arrangement of results, will be a valuable contribution to the psychology of childhood. But whether it is or is not, there can be no doubt of the value of its effects upon those who make such observations and upon the quality of their subsequent work.

One thing more. Distinct views are dependent upon contrasts, as well as upon resemblances, among the things considered. To know thoroughly what a thing is, it is important to know also what it is not. False syntax, injudiciously used, may provoke a tendency to bad English, where originally no such tendency existed; but the chances are against it, unless the examples selected are so attractive by their rare occurrence and absurdity as to be adopted into one's vocabulary solely on that account. The correction of such false syntax of course does no good, and is perfectly useless. So hypothetical, fanciful, absurd, or

otherwise attractive analyses of vices that have no existence are not only useless, but are likely to do harm. On the other hand, only good can come of the careful analysis and ruthless (not retributive, however,) bringing to light of all the contemptible antecedents and consequences of a lie, when those antecedents and painful consequences are perfectly well-known. It may happen that in a school a lie has been told under such circumstances that the whole school knows about it.

When this is not the case, it usually happens that the instructor and the pupil alone know all about the occurrence. Then the work must of course be done with the individual. Opportunities to study vices in this way are not lacking. Of course in such work, judgment and heart power are essentials. We shall always emphasize the study of virtue, but we cannot escape the study of vice. For direct explicit moral training, which I believe necessary, special qualifications are requisite. The work must be done by those whose skill and power have been carefully brought to perfection. No teacher succeeds anywhere without the constant exercise of *judgment*; still less will he succeed in the delicate work of moral training without it.

XII.

THE ECONOMIC AND SOCIAL ASPECTS OF EDUCATION.

BY EDMUND J. JAMES, PH. D., PROFESSOR OF FINANCE AND
ADMINISTRATION IN THE WHARTON SCHOOL OF FINANCE
AND ECONOMY, UNIVERSITY OF PENNSYLVANIA,
PHILADELPHIA.

It gives me great pleasure to discuss the subject of education before an audience like this. It is always pleasant to be able to congratulate one's audience. It puts all parties in a good humor, and paves the way for a thorough understanding. Teachers may, I think, be congratulated as a class, from more than one stand-point.

In the first place, they are enlisted in a work which, while it is largely missionary in character, has all the ennobling and inspiring features of such work. It is a work of fundamental importance to the individual and to the race, to society in general and to one's own country. No one can heartily enlist in a great cause, without being ennobled and lifted by it. No one was ever in the grip of the gods, without being lifted out of oneself into a higher sphere; nor can any one hitch his wagon to a star, without being lifted a little way out of the sordid miasma of individual selfishness. This refining and ennobling influence of a great cause on individual character is illustrated all about us and has been illustrated in history a thousand times.

Caesar was undoubtedly one of the most dissipated and ambitious of all the Roman nobles of his time; but, from the moment that he fairly conceived the great opportunity open to him to rejuvenate the Roman state, and with that the whole ancient world, one can see the steadily growing purification of purpose, clear to the sad end which overwhelmed so much that was hopeful in the Republic.

So we, as teachers, no matter how narrow and egoistic we are, no matter how mean and selfish by nature, can scarcely escape being lifted to higher levels by the very importance of our work. We must, indeed, be mean of soul, if the contemplation of this glorious work and of our magnificent opportunities does not fire our hearts and move our arms to new deeds of vigor and strength in the cause.

From this point of view, we are to be congratulated all the more, because this work, great and glorious as it is now, must become still greater and more glorious with every passing year. There was never a time in all previous history when the welfare of the future of the race depended so much on the professional teacher as it does to-day.

Our civilization is vastly more complicated than any other civilization that we know anything about. A barbarous tribe may maintain itself in its existing state by letting the children pick up their training in the use of bow and arrow, as best they may from watching their elders; though we know of few tribes so depraved that they do not afford some training to their youth. A society like that of Athens or Rome, based on the absolute slavery of the many to the few, might perpetuate itself even though it left the educa-

tion of its youth entirely to the family or gave only that modicum of attention which was characteristic of Athens in its glory. Russia may perpetuate her power for an indefinite period, though it make no effort to educate the vast mass of its peasantry. But a society like that of Western Europe, and particularly like that of the United States in which an effort is making to extend to every man a share in making the laws, in which at least nearly all important laws are submitted indirectly to a vote of all the male persons twenty-one years of age, in which the laborer is gradually coming to himself and raising the question whether he receives a fair share of the goods of life in return for his labor,—in such society, I say, the question of popular education assumes a different form. Popular intelligence was, perhaps, an article of luxury to mediaeval society, or perhaps it might have formed an indigestible element in the political system of that period; but it has become an article of prime necessity for our civilization. Without it, we must go back to barbarism. And the finer and more complete our society becomes, the greater the necessity of popular education to keep it even at its present stage, to say nothing of steadily advancing it. Now to popular education, on the scale and of the kind necessary to-day, the professional teacher is an indispensable requisite, an absolute *sine qua non*; and the more it advances, the greater the need for the teacher and for the better and nobler teacher.

We are, then, fortunate in being embarked in a cause which is not only important, but which is bound to become more and more important as time goes on. This fact will, of course, increase our responsibility,

but it must also increase our courage and help us to run an ever more successful race.

But we are fortunate, my friends, in still another point. Not only have we hitched our wagon to a star, not only are we enlisted in the most important work of the time, but this fact is being recognized at this period by our fellow-beings as it never was before. I shall show in a moment how many instances we have of the growing recognition of the importance of education in general, and can only call your attention, therefore, to the fact in this connection that the position of teacher was never more dignified and honored than to-day. It was never so well remunerated, either in pecuniary or honorary aspects. I need not adduce proof of this fact. You all know it to be so. Now, it is pleasant to feel that one is appreciated. It increases the pleasure in the work, and consequently the total output of the product, and the quality of each individual portion thereof.

You have doubtless read what Mr. Bryce says of American society in his book. The class which is coming to form the aristocracy of the community in this country is the educated class. The Presidents of Harvard, of Columbia, and of Pennsylvania easily occupy the most honorable positions in the three greatest cities of our Eastern seaboard. People in the country at large seldom know who is Mayor of Boston, or even Governor of Massachusetts, but they all know who is President of Harvard College. The head of our public school system in this country, Dr. W. T. Harris, is known throughout the length and breadth of the country, while the names of such men as MacAlister, Woodward, Marble, Balliet, and many

another are household words in educational circles, from one end of the country to the other.

The average rate of wages in our calling has been going steadily up, in spite of the fact that women are to an ever increasing extent taking the place of men in the work. I come from a city, in which nine years ago the largest salary paid to a teacher was \$2,400. To-day there are ten positions which yield more than that, and it was urged a short time ago that the salary of Superintendent of Schools should be made equal to that of Mayor—\$10,000. It is a small and yet significant sign that the teacher as such is now being recognized at World's fairs, in party platforms, and in public office. We are only at the threshold, so to speak, of a wider recognition than ever; but the circumstances indicated serve to show that the world around us is beginning to appreciate the importance of the work in which we are engaged.

I think we may fairly say that education is now coming to be recognized as one of the great and permanent interests of life, an interest as far reaching and all-embracing as politics or religion. We see this in very many directions besides those indicated above, in connection with the growing recognition of the teacher's calling. One of the striking instances is to be found in the formal organization of the ministries of education in various countries. Prior to this century, no country in Europe, except the German States, recognized in the formal organization of the government any such thing as a school or educational system; and indeed, it is really since 1870,—*i. e.*, less than a quarter of a century ago,—that any efficient organization of public education has taken place

in most continental countries. Now, France, Italy, Spain, Austria, Germany, England, and even Russia have departments or ministries of education, which are recognized as controlling one of the leading and most important divisions of public administration. This is a significant fact, and it means much more than would appear to a superficial observer. It points to a radical change in the views of European government, as to the importance of popular education. It means that, side by side with the need of defence against foreign aggression, hand in hand with the necessity for protection against domestic violence, goes the demand for the education of the people. We Americans are apt to think sometimes, that European nations are devoting all their energies to preparation for war, that consequently every other side of national life is neglected. A certain modicum of truth lies in this assumption; but even this preparation for war, as it is carried on in Europe, involves an immense development of the educational system as such. The terrible lessons of the year 1870-71, for the French people, did not lead merely to a re-organization of their military system, but to a complete revolution of their educational system as well, and probably no nation in history has made such rapid advances along educational lines within such a brief period as did France from 1873 to 1880. But in this contest for supremacy, Germany had no desire to be left behind, and it is to-day along many lines as easily first as it was twenty years ago. The progress in Italy has been as marvellous, and the results of progress little short of those in France and Germany, when one makes due allowance for differences in condition.

In our own country, this recognition is no less plain, though up to the present it has taken a different form. We have no ministry of education in the European sense of the term at all. We do not acknowledge, in any open way, that the Federal Government has anything to do with education. Indeed, a great party, or perhaps I ought to say a great portion of our people, for this class is to be found in both political parties, takes the ground that any interference with education on the part of the Federal Government is a gross violation of our Federal Constitution; that any subsidy on the part of the Federal Government for educational purposes is in all its effects injurious, no matter from what stand-point it may be viewed. In spite of this deep-rooted sentiment, however, which is so strong that it would prefer ignorance growing out of local selfishness or incapacity to wisdom introduced or developed by national agencies, some very decided recognition has been given to the cause of education by the Federal Government. The National Bureau of Education, although only a bureau of information, has served a valuable function in collecting and distributing facts bearing on educational affairs, has steadily strengthened its hold upon Congress and the country, and has helped to magnify the cause of education in a most efficient way. The individual states have done more. Although none of them have developed what could be called a ministry of education, or any body with such functions, yet they have all either boards of education or superintendents of public instruction, who at least incorporate in themselves, so to speak, the idea of public education and represent it to the people. Most counties have done

a similar thing in their county superintendents, and the cities followed with similar officers. All this is a creation of the last generation, indeed one might almost say of the last twenty-five years, though many features of the system are over fifty years old in some states.

The recognition of the importance of education, however, by governments both domestic and foreign, can be perhaps best seen in the large increase in the amount of money spent by general and local governments in the cause of education. Next to the military and the courts, education demands and receives the most money of all branches of public administration. The growth of government grants for educational purposes in England has been most striking. France shows a similar development, as do Italy, Germany, and Austria. Nor does our own country fall any whit behind. The Federal Government has granted lands of the intrinsic value of nearly \$1,000,000,000 for educational purposes. It now appropriates each year over \$30,000 to each state in the Union for the support of a state agricultural college and experiment station, and will increase this sum by \$1,000 each year for each state until the total amounts to \$40,000 each per year, or nearly \$2,000,000 in all per year. The states themselves appropriate large sums for higher and elementary education, and in some instances for secondary education.

But this does not by any means exhaust the list. The most of the money spent on public education is collected in the form of taxes from the localities. The budget of any large city contains in its school appropriation the largest single item of expenditure.

But these are not by any means the only evidences of the increasing importance of education and the growing recognition of its importance. The systematic efforts now making by nearly all the religious denominations, to enlarge and multiply the educational institutions under their charge, reveal an increasing appreciation of this factor. The Catholic Church is trying to build up a complete system of schools, from the kindergarten to the university, and including at least theology, of the professional schools. The German Lutherans are emulating their example. And if the Presbyterians, Methodists, and Baptists are not encroaching on the domain of elementary education, they are all the more eager to occupy the field of academic and collegiate training. The churches see, as they never saw before, that education is the key to our societary problems and that an ignorant church in this age of the world must be a dying church. The Catholics and Protestants are vying with one another in Washington to-day to see who can get the lead in organizing a national university. The Baptists have just provided for the founding of a great university in Chicago, and the Methodists have largely increased the endowments of their leading colleges. An ever increasing proportion of the church's wealth is going, not into religion, but into education.

Nor does this summary exhaust by any means the list of indications that education is becoming a leading object of interest to modern society. Not only the government and the church, but private individuals, are showing to an unheard-of extent their appreciation of this important subject, and that in many ways. In the first place, by gifts of money. Johns Hopkins in

Baltimore, Jonas G. Clark in Worcester, Cornell in Ithaca, Rockefeller in Chicago, Colgate in Hamilton, Towne and Wharton in Philadelphia, Taylor in Bryn Mawr, Vassar at Poughkeepsie, Stanford in California, Pratt in Brooklyn, Cooper in New York, Drexel in Philadelphia are a few examples of the many, many men who with smaller and larger sums have built themselves monuments of undying lustre in the creation of great educational institutions, and they are evidently only the van-guard of a great host who are marching on to lay down on the altar of education magnificent offerings. Great as these forces are individually and collectively, they are not doing more for education and they are a no more striking indication of the growing importance of education, than are the associations of private individuals which have at heart the advance of educational art and science. The Sub-primary School Society and the Public Education Society of Philadelphia have revolutionized the educational system of that city at many points, and they are only specimens of similar societies in nearly all our great cities. Your own New-England Conference of Educational Workers promises to achieve similar great results.

Perhaps, however, the best sign of all of the growing appreciation of education, using that term in its widest sense, is to be found in the rapidly increasing number of different kinds of educational institutions. A century and a half ago, there was in this country in reality only one institution which, though called a college, was in fact a sort of grammar school, in the English sense of the term, or what we would call a classical high school. In this, was educated every

youth of good parts and promising abilities. They were trained in the "three R's," in elementary mathematics, a little Latin, less Greek, and occasionally a bit of Hebrew, with regular lessons in Scripture. If the boy wished to become a lawyer or a physician, he got whatever knowledge he needed from a practising lawyer or physician. If he wanted to become a clergyman, he got a little assistance in reading divinity from some active minister. If he wished to become anything else, he did not go even to the grammar school, but found some one who was following the career which he wished to pursue and entered himself as an apprentice ; or, if it were an unskilled occupation, he took it up as he was, without any preparation. There was no law school, no medical school, no veterinary school, no school of engineering, no art school, no music school,—indeed, no other school than the one referred to above and possibly the spelling school.

How different the state of things to-day ! We are coming, by slow stages it is true, though more rapidly now than at any previous period of the world's history, to recognize that whatever there is in art there must be a method of training suitable to that art,—nay, more, that there must be a science of some sort underlying that art which must be made the basis of any intelligent training in the same. With this recognition, must come the conviction that there is a method of instruction and training, combining the science and the art, which, if sought out and properly applied, will result in a higher type of professional skill than any which was developed under the old system. We see this process fully carried out in the

training for law, for example, and see, moreover, how unequally public sentiment on this and similar questions is developed. One view is that the best training for law is a liberal education and then the actual contact with legal things that life in the office of a lawyer gives. This is, even to-day, the opinion of the majority of liberally educated lawyers in the country. Another view is that the liberal education is superfluous and, to a large extent, the law school also. This is held, I presume, by the vast majority of uneducated lawyers in this country to-day, and they make up a great bulk of the profession. Then a third view is that, after a liberal education, the training of a law school in the study of the law is valuable as a preliminary to the practice of the law. This idea is entertained by a continually increasing number of the best lawyers of the country. There is little doubt that it is the correct one from the educational point of view and that it is destined to receive the approval of all parties in the course of time. Medicine represents a profession in which the battle has been fought to a final victory. Few are the doctors now in any of the more civilized portions of the country, who would advise a young man not to go to a medical school. The same contest as in law is going on in veterinary surgery, in dentistry, etc., etc. In a different field, that of the mechanical arts or trades, the battle has just begun, though the signs are not wanting that it will prove short and will result in a decisive victory for the educational institution as against the shop. In the line of technical professions, the school has had a vantage ground in all those branches which have been developed lately and is getting the upper hand in all

the older ones. The number of people who think of entering steam or electrical engineering, or civil engineering, or architecture in any of the higher lines, without getting the advantage of a systematic course of school training, is growing visibly smaller every year.

In a word, popular belief in education is on the increase, as is shown by all these circumstances which I have pointed out, and that is surely a most cheering sign for those of us who are devoting our lives to one or another phase of this great work.

And before I leave this point, I would like to call attention to the fact that we, as American teachers, have reason to congratulate ourselves on the fact that we are at work in a field where I believe our country is destined to reap the most enduring laurels. Education is almost a virgin soil. All that has been achieved in this department is as nothing to that which awaits us. No country has greater opportunities than ours. No one has greater problems or better aids with which to work. We may be able to work out a characteristic architecture which would deserve praise for its adaptation to our needs. We cannot hope to surpass the beauty and grace and sublimity of Greece and Rome and mediaeval Europe. We may be able to work effects in marble and on the canvas which will challenge admiration, particularly of ourselves; but Michael Angelo and Phidias will probably remain unsurpassed. Our Bret Hartes and Longfells and Bryants and Hawthornes and Howells and Jameses may give us an American literature; but Homer and Virgil and Dante and Goethe and Shakespeare are of the past, and our own future at present

gives no signs of such worthies. We may affect to some extent the future lawgiving of the world; but Rome has stamped her seal upon it for all time to come. In a word philosophy, literature, art, music, law, army, government had received their highest development in a certain sense, before they came to us: their great names may possibly be equalled—certainly never surpassed. The material world and its mastery is indeed, largely open to us; but, in the intellectual and moral fields, education is particularly ours. We are the first modern nation to undertake to govern ourselves through republican forms. Education has, therefore, assumed an importance for us which it has at present for no other people. Is it too much to expect, therefore, that our great achievements will be along educational lines, and that you and I and all of us may feel that same pride in the achievements of some great educationist, which the common soldier, the sergeant, captain, colonel, or general may feel in the glorious exploits of some great leader of armies.

Education as a whole may be viewed from several aspects. It may be regarded as to its methods, involving of course an examination of the principles underlying any given method or combination of methods,—*i. e.*, the science and art of education. We may call this the pedagogical aspect. I am aware that many writers within and without the field of education deny *in toto* the existence of any such thing as a science of education. The testimony of one of the most distinguished college presidents in the country, Dr. Eliot, to the effect that there is no such thing, has been recently bolstered up by the opinion of an eminent professor of philosophy in the same institution, to the

effect that there can be no such thing. The fact that there can be a discussion over this subject among intelligent teachers of much experience in the classroom proves that there is perhaps at present no science of education in the sense that there is a science of mathematics, or rather if there be such a science it is not of the same character as mathematics. But this is very far from proving that there can be no such science. I am one of those who believe that there is at present a body of doctrine relating to methods of education, which may be so taught as to be of great value to the future teacher, and I have, moreover, full faith that this body of doctrine will be enlarged as our experience increases and in connection with practical exercises will form a constituent part of the training of as large a number of our future teachers, as the training of the law school or medical school forms of the preparation for the work of the future lawyer or physician. Of the pedagogical aspects of education, however, I do not care to treat especially in this paper.

Education may be viewed again from its administrative side, as to its proper organization. By this I mean the relation of education to the state, its control and supervision regarded as a branch of public administration: the relation of the local and general government to its support and control; the method of choosing teachers, superintendents, school boards; the authority of superintendents toward the teachers on the one hand and the board on the other or toward the public; the relation of teachers toward the controlling authorities and toward the parents, etc., etc. This class of questions, though very important, has

received little or no attention from writers on education. The questions have been settled in a practical way as they arose, but almost no systematic consideration has been given to them by the students of our educational problems. They are, many of them, very far from being satisfactorily answered, as the numerous evils in our educational administration amply prove. They are worthy of very careful study; and it is not least among the advantages I anticipate from the establishment of departments of pedagogy in our large institutions of learning, that we shall then have a class of men whose special business it will be to study these problems. It is, however, not especially to these questions that I care to call attention on this occasion.

Education may be viewed again as to its objects and results. This is to my mind the most important aspect of education, and it is the one to which I wish to invite your attention to-night. It is the most important, because upon it depends really the answer to the questions arising in the case of the other aspects which I mentioned. The question of proper pedagogical methods cannot be answered independently of the object of education itself. The problem of proper organization is at bottom rooted in the question of objects. The "idea" of education in the Platonic sense of the term, as the controlling notion or concept or ideal, if you please to speak of it so, must settle the question of system and method. This question, therefore, as one would naturally expect from the analysis just given, is the most difficult one of all. It is perhaps like an equation of the seventh degree, at present beyond any general solution. This is the

view, you will remember, taken by Dr. Royce in a late number of the *Educational Review*. Granting, however, for a moment that that be true, we still have a great and worthy object in trying to give a special and particular solution to this special and particular problem of modern American education.

If we are not able to answer the question for all time and all places, What is the true end of education, let us at least buckle on our armor for a steady and determined assault on the problem: What is the true end of education for the America of to-day?

Of course, this is by no means a simple problem. It has many of the difficulties of the general question. It has its intellectual, industrial, social, ethical, and moral aspects; and we can give of course an ultimate answer only after all these aspects have been duly considered. Without claiming for the point of view which I shall advance on this occasion any undue importance, without wishing to disparage or belittle any other point of view or any other class of considerations, I wish to present to you the answer to the question just formulated, which a study of social and economic and political problems has brought to me, and, having given the answer in general terms, I wish to consider some of the pending educational problems in the light of this general solution.

What, then, should be the fundamental object of an American system of education, looking at it from an economic and social point of view? My answer in brief is: the fullest possible development and training of all forms of ability, mental, moral, and aesthetic, to be found or cultivated in the American people. This does not mean merely the development of the ability

of a few individuals to the highest point, or of a few types of ability in many individuals, but of all useful types of ability in all individuals.

We may draw a useful comparison from the economic world. In my view, the economic policy of a country should be directed toward developing all its material capabilities. All the advantages of soil and climate should be exploited to their utmost. Its natural water ways should be corrected and improved. New means of communication should be opened. Its rivers should be bridged, their navigable channels deepened and widened, railroads built, canals opened, turnpikes constructed. Its mineral wealth should be made accessible and available, its harbors deepened, enlarged, and improved, its agriculture encouraged along all possible lines, its live stock improved, new and better crops introduced, its forests cultivated, fish planted in all good places,—in a word, everything should be done which will help develop the material resources of the country and place them at the disposal of man. This demands a careful and well considered policy, directed toward developing manufacturing, commerce, mining, agriculture, and forestry. Is there a gold mine or silver mine or coal mine in some remote portion of the national domain? If so, the economic policy of the country should find it out and make it a part of the available resources of the nation. Is there the possibility of some great crop which will revolutionize agriculture and make a thousand grains to grow where but one grew before? If so, the economic system should discover this crop and naturalize it. Is there the possibility of some great and fruitful industry which can bring the blessings of

civilizations to an otherwise barren waste? If so, the economic system should introduce and develop it.

In the same way, the educational policy of the country should be directed toward calling forth and training all of the resources of the human being, so to speak; to *exciting* and developing all the various forms of faculty, using that term in the good old New-England sense. Is there the possibility of a great singer in some outlying rural district? If so, our educational system should find it out and, having discovered it, it should never let go its hold on the boy or girl, sent of the gods, until the very highest possibility has become a reality. Is there a mute inglorious Milton? Our educational system should bring him an opportunity to develop himself. Is there in some lonely school-house among the hills a possible Edison, or Newton, Faraday, or Darwin, or Watt, or Stevenson, or Webster, or Eliot, or Gilman, or Brooks, or Beecher? Our educational system should seek him out and put him on the high road to his loftiest usefulness.

The greatest distinction between barbarism and civilization lies in the fact that, in the latter society, there is an opportunity of vastly more types of ability, than in the former. Consider for a moment a tribe of Hottentots or even of American Indians, and, running over in your mind the men who fill the public eye, either by their names or by their works, how many of them would find a useful place in such society? The great preachers, physicians, lawyers, engineers, merchants, teachers, scientific investigators, artists, singers, manufacturers, all these classes that help make our society bearable or enjoyable, would

be absolutely lost or good-for-nothing in such a state. Indeed, I can think only of Sullivan and similar characters who would be found at all useful, and even they would probably find that they would have to turn their physical strength to other purposes than prize-fighting. But, even if we compare ancient civilized society with our own, the same difference is to be found, though of course not in so striking a degree. Athens, in the very height of its glory, had no use for the student of natural sciences. Even Socrates thought that nothing could be gained from the study of the stones and the trees. All that magnificent series of great scholars, investigators, and inventors, beginning with Bacon and ending with Edison, would have found no useful function to perform in the world subject to Athens and Rome. We should, of course, try to hold everything good they had, but we have now and shall continue to have a vastly more varied civilization than they, largely because we provide for the play and the development of a vastly greater number of abilities. If this be a true view of society, certainly there will be general agreement as to the truth of a portion at least of my thesis, that one of the objects of an educational system is the systematic and thorough exploration and cultivation of the wide range of human faculties to be found in our society. If this be accepted as a correct formulation of the true end of an educational system, so far as it is viewed from the stand-point of the student of economics and politics, it remains for us on this occasion to pass in review certain tendencies of our present education and pronounce upon them in the light of this thesis.

We may divide education from one point of view

into elementary, secondary, higher, professional, technical, and trade. There would perhaps be agreement as to this classification and to the definition of its various parts, in regard to only one or two of these classes, and it is quite possible that in this country to-day it is not feasible to organize our education strictly on these lines, even if it were desirable. However, we may perhaps all agree as to the scope and function of elementary education more especially, as it, for a large part of its course, covers much the same ground in all modern civilized countries. Let us take as the period of elementary education the years from 6 to 14, the time usually covered by the compulsory school laws; the time at which the country child has usually completed the round of opportunities offered in the best rural schools; the time at which the city child is ready for the high school. The school during this period must accomplish certain results, in order to satisfy the minimum recognized by the common consent of all parties. The pupils must learn to read, write, and cipher. This is demanded by all educationalists and all practical men. But anything more than this, or rather what more than this, is a great subject of dispute. In Germany, the theory is accepted by the ruling authorities that boys who are looking forward to enter one of the learned professions must begin their work of preparation at the close of the ninth year of their lives. Consequently the lad begins the study of Latin at that date, if his parents wish to keep open for him the chance to enter any of the higher walks of professional life. In this country, with few exceptions, the period of studying Latin and Greek is opened much later, oftentimes not until the

thirteenth or fourteenth year. The point of view presented above favors our American plan. Our common schools should of course teach the absolutely necessary minimum; but they should not merely impart a certain amount of instruction, which every child in our society should have. They should engage very largely in what, for lack of a better term, I must call the exploring work,—*i. e.*, their curriculum should be so constituted that it should assist in discovering the appetites of children and furnishing them so far as possible efficient assistance in developing them. Thus, the amount of instruction which the average child may obtain in history, or geography, or grammar, or drawing may not be very great. Some of the children will get next to no use out of them. But the service which each of these branches does in finding out new tastes and faculties in the children, by which they may be awakened forever and launched upon the high-road to success and usefulness, is simply incalculable. Did you ever stop to think what an intellect-killing institution our old-fashioned elementary school was? Nothing taught but reading, writing, and arithmetic. Indeed, it is questionable whether reading in any true sense was taught at all. Spelling took the major part of the time. Any child that could not or would not parse, spell, or cipher was voted a hopeless dunce, and the most energetic measures were adopted to convince him of the view entertained by the teacher. No wonder that the school-room seemed a purgatory to many bright children. Now, with the introduction of every new element, at least one child was taken from the class of hopeless dunces and promoted to the list of good pupils. Geography saved

many, history many more. Drawing and singing revealed new and undiscovered aptitudes, and with every new feature of our elementary work has come a new power and vigor into our educational system.

The fight to-day is turning on the subject of manual training. Shall it become a constituent part of our elementary work? You have doubtless read the answer which I would give to this question. By all means, get it into the lower grades of schools, wherever possible. I do not expect it to make expert mechanics of the boys or skilled seamstresses of the girls. I am not inclined to think that all boys would be helped enormously by having to submit to this training; but I am reasonably sure that a modicum of it will not injure any of them, while its general introduction would reveal undreamed-of tastes and abilities in boys now classed as hopeless dullards or incorrigible idlers. The revealing powers of such instruction are simply marvellous. Such instruction may be costly in one sense, but it is wonderfully cheap in the real sense.

There is another aspect of this subject which has been treated so often and so well, that I need only mention it in this connection, and that is the influence of manual training in increasing the respect for manual labor, which is directed toward useful ends in a useful way. There is much nonsense talked on this subject. There is no particular reason why a boy should have respect for most of the manual labor which is performed in our society. It is most of it wretched work, demanding little or no skill, seeming indeed to give no play for skill. I think it is the experience of nearly all of us, that we could do the work

of the average mechanic who comes to make repairs in our houses much better than he does it. For such slovenly botch-work as many a mechanic is guilty of, no boy ought to have respect. If he did, it would argue a hopeless condition of mind, no whit above the botch-makers.

The great advantage of manual training is that it teaches the boy that, as there are endless ways of doing things wrong, so there are few, oftentimes only one, way of doing them right. It shows him the endless field open to skill and industry in the mechanic arts and, by yoking intelligence and manual labor together, even for the few short hours in which he is brought into contact with it, makes an impression on his mind which is never lost and may turn many a bright fellow into channels in which he may succeed, when, if left to himself and subject only to the influence of the old fashioned school, he might have become a useless physician or lawyer. I have not by any means become convinced that manual training is a cure-all for laziness and stupidity, as my friend Mr. Woodward is sometimes accused of believing. These are permanent categories of school life, it would almost seem. They are the kind of devils that yield only to the most persistent treatment, but I do believe that many cases which are taken for laziness and stupidity are not such and that manual training would assist in proving them not to be such.

What is true of manual training is in my opinion true of any feature of school work, which calls forth a kind of taste or ability which existing school facilities do not reveal. How important on this point of view does the whole range of kindergarten instruction

become, since this very function of exploring the capabilities of its charges is the kindergarten function *par excellence*. And this brings me to the next point of my paper,—viz., the answer which this mode of viewing education gives to the question as to the true relation of the kindergarten to a general system of education, and particularly to an American system of education. If I have not unduly emphasized the exploring function of an educational system, it is perfectly plain that the kindergarten or some similar institution is an absolutely necessary part of the scheme. Life is short and is becoming very busy. The things that the schools must do are increasing every day. The school life of children is not correspondingly lengthened. If we are to carry out, then, this important feature of an educational system, which consists in testing and developing existing and latent capacities, we shall find a most important auxiliary in an institution which begins at the most plastic age, which does not encroach on the school period, and which prepares the way for subsequent school work.

I have, however, developed my thought on this subject as also on the relation of manual training to our education, in another place, and must hasten on to one or two more aspects of our subject. Our educational system, then, must first of all aid in discovering the human wealth of our society. It must then follow up this discovery by the most efficient aid to the development of this ability to its highest point. This means a thorough system of secondary, higher, trade, professional, and technical training: a system which shall be so perfect in its details, so wide-spread in its ramifications, that it will absolutely develop all

our available ability as a nation to the very highest standard. This is our ideal. Nothing less than continual striving toward this will or ought to satisfy us.

I am aware that this runs counter to the ordinary prejudices of us all as Americans and Anglo-Saxons. We are very apt to say, for example, when it is proposed to establish a medical school or law school at public expense: "Oh! let a man who wants a medical or legal education get it himself. Let him pay enough to men who can teach him, to get them to do it; we are not interested in his getting a training by which he shall make a living." I think it is not too much to say that this statement represents the idea of an average American on this subject. It is a striking testimony, too, to the general inconsistency of humanity, for one hears this argument advanced in states, where by common consent the state provides free training in agriculture and the mechanic arts. However, the point I wish to urge here is that the interest of society demands that there should be the fullest possible opportunity to get a first class medical education. It is to the interest of the individual, of course, who expects to practise, to get a medical training at least equal to that of his competitors. But it is to the interest of the community that that training shall be of the highest possible character. The physician needs skill for himself, that his competitors cannot take away his practice; the community needs skill far more, that it may be cured. There is, of course, a general agreement of a mild sort, as to the desirability of such training and consequently as to the need of instruction where it can be given. But, after all, the number of people who believe in its essentialness

to our system of education is comparatively small. Now, what is true of the medical school is equally true of all other institutions for professional or technical or trade training. The distinction between professional and trade schools is not an easy one to make clear under existing conditions. But, a professional school of the proper sort may be defined as an institution which affords a special training in preparation for a special calling, at the close of an extended preliminary training of a general nature. A medical school or law school or theological school, in the German or French senses of the term, are thus true professional schools. They aim to give a special curriculum, adapted to the wants of those who intend to enter the church or practise law or medicine. But, this training is open, only to those who have taken the extensive course of a general nature implied in completing the curriculum of the classical gymnasium, a course extending in form over nine years from the beginning of the tenth year of age and in reality over ten or eleven years according to the industry and ability of the pupil. The training for the so-called technical professions, engineering, architecture, etc., belongs from this point of view in the same category, and it is called technical, simply because of the nature of the career, and not because of any difference in the length or character of the preparatory course.

In this country, we allow a student with practically no preparatory training, or at least with a very elementary training, to enter these schools; so that they do not really belong in the same category as the European schools at all. They are purely trade schools, with little or no preliminary preparation. Our tech-

nical schools, moreover, take the pupils at a much younger age, and with much less preliminary training, than the continental schools, though it must be said to their honor that they do require far more in this respect than the so-called professional schools.

A trade school, on the other hand, is an institution which takes pupils at an early age, say fourteen or fifteen, or in some cases ten or twelve, and prepares them as quickly as possible for the pursuit of a handicraft or a trade. The distinctive difference, between a trade school and a professional or technical school in the better sense, is that the former trains chiefly for the practical and largely for the handicrafts, the latter chiefly in the sciences underlying the work of the career. The former trains the man, who actually performs the physical labor involved in the pursuit of a craft; the latter, the man who directs and controls such physical labor, wherever such direction requires scientific training. This general difference runs through nearly all branches of human endeavor and finds itself reflected, therefore, in corresponding institutions, or ought to find itself so reflected.

From an economic point of view, then, the educational system should contain a variety of institutions, corresponding to the variety of work to be done in this world, for which a systematic training may be useful. The varieties of work to be done are increasing vastly in number every year. The callings which become differentiated in consequence are becoming more numerous. The departments of work in which systematic training is of value are rapidly increasing in number and extent. Consequently the number of different kinds of educational institutions required by

our society is vastly greater than formerly and is increasing continually. There will be no stop to the development, unless civilization ceases to progress. Our demand, therefore, from an economic point of view is that society shall continually take stock of its existing educational institutions, shall investigate the question whether the necessary ones are provided for, and, if not, shall take such steps as may be necessary to secure their establishment and support.

I cannot undertake to summarize the existing institutions in our midst, but I cannot refrain from mentioning a few for purposes of illustration. We now have in this country, fairly well distributed over the country, the following institutions, such as they are: schools for law, medicine, theology, dentistry, veterinary surgery, which lay claim to the dignity of professional schools; engineering, architecture, and normal schools, which may be classed as technical schools; colleges, which may stand for so-called liberal higher education; universities, excluding the above professional schools and standing essentially for the support and development of science in general, leading to the teacher's career; academies and high schools, answering to the demand for secondary training in preparation for college, or what is called "life"; the elementary school, which underlies the whole system. In addition, we have in a few places, the trade school, the commercial college, the musical conservatory, the school of design, the school of painting, etc.

Now, no economist can for a moment concede that this country is even fairly well supplied, either with good schools of any kind or with schools of any sort

of many of these kinds. We have too many medical schools, such as they are. We have hardly a single one, such as it ought to be. Our medical students must go abroad for the best opportunities in almost every line of medicine or surgery. The number of students who can go abroad is very small relatively. The number who could attend first-class medical schools, if we had them, is very large.

Almost the same statement may be made of our law schools, and it is certainly true of our theological schools. Our technical schools are better, though even here we are far behind what we ought to be. Our opportunities for scientific research are lamentably behind those of Europe. We dawdle about and wait to see what the scientific men of Europe are saying, thinking, and doing, and then with our appliances try to repeat their experiments to see if they have not made mistakes. Take, for example, a field largely technical, though it is based on scientific investigation, that of organic chemistry. Our industry in this country is run almost exclusively by exploiting the results of German laboratories in this field. How immensely cheaper it would be for us to sustain a large number of these laboratories at work in this country on the scientific problems, which underlie the utilization of our material resources. We should, then, not have to wait years and decades for an answer to many pressing questions of our industry.

What is true of natural science is also largely true of the economic, philosophic, and moral sciences in general. We have not a single endowed institution for the investigation of economic and social and political questions in our country. See what an immense

expenditure of time, effort, and money our legislatures periodically make, to get a little information on such topics, as they must legislate about. Just now, they are wrestling with tax problems. Nearly every American state has appointed a tax committee in the past twenty years to investigate questions of taxation. When the commissioners looked about for some one to give them certain information which they wished, they found absolutely no one in the country who could give it to them; and then, instead of spending the money at their disposal in getting some one who knew something of the subject to prepare an account of existing tax systems, for example, they spent the money in junketing.

The American people could save millions and millions of dollars every year, if they would spend a few hundred thousands in support of properly organized laboratories of investigation in the various lines of human sciences. They have made a fair beginning, but alas! it remains thus far a beginning only.

Take another example, this time from a more debatable field, that of business education. We are in the habit, particularly in meetings of college men, of hearing severe criticism passed upon the so-called business or commercial college. I think, nothing could be a better proof of the superficial way in which most people look at educational questions than this very instance. An analysis of our industrial system reveals, it seems to me, the plain fact that the business college is a necessary and probably permanent factor of our educational system. It responds to a wide-spread and continually increasing want. It gives a technical preparation for certain specified

callings. Our actual business colleges are often enough poor things. They do not do what they pretend to do, but that they correspond to a very real need is amply proved by their extraordinary distribution and rapid growth in numbers and attendance. Our efforts should be directed, not toward reducing their number or trying to extinguish them altogether,—a result beyond the reach of our ability and fortunately so in my opinion,—but in developing some really first-class specimens of the kind, by which all the existing lot can measure themselves up.

There are some other interesting types which I should like to take up and discuss from this point of view, such as the normal school, school of pedagogy, schools of finance and economy, etc.; but these instances suffice to illustrate one part of my thesis,—viz., the absolute necessity of a wide-spread system of special schools of all grades, which can give the special training for any given calling, which will secure the highest result from any given man or woman. I cannot leave the subject of the hour, however, without touching on at least two of its phases or, perhaps better said, on two questions which may arise in connection with it.

It is a very natural fear that will doubtless find expression in any discussion of this subject, that a scheme of education like that indicated in the plan suggested by this paper will tend to develop the special, technical, professional, or trade element in education at the expense of the liberal and general. This topic would naturally require for its adequate treatment a whole paper of itself. I cannot do more than indicate briefly the line of defence against this

charge. In the first place, if by general and liberal is meant superficial, (and this is often the case,) I would plead guilty at once. Such a scheme of education would not be so superficial as the present. If, however, it is meant that such a scheme would not secure mental discipline, would not beget serious and sober habits of work and study, would not broaden the view, widen the outlook, and quicken the sympathies for all that is good and true and beautiful, I would only say that whether it did so or not would depend just as it does now on how the particular schools are organized or managed.

One must keep in mind, however, that in the sphere of elementary and secondary education the exploring character, which is demanded of an educational system from this point of view, would necessitate the contact of each pupil with a wide range of study, while the college system need not be different from what it has already come to be under our present system. Moreover, even the trade schools, however narrow they should be made, would be a vast improvement in all liberal or refining ways upon the shop or the street, where our youth now pick up such an education as they may. At bottom, the demand of the economist is for a wider, more liberal training than is accorded at present; for it calls for a systematic training where at present there is none at all and for a school training where now there is only the training of the shop. Moreover, it must be borne in mind that in all school training it is possible to introduce liberal elements in the form of so-called culture studies which can be pursued side by side with the nominally technical studies. Indeed, this is the only way to get

the great mass of our people to seek a liberal training in the ordinary sense at all. It must be continued with a practical course, in order to get and hold the average man.

Finally, so far as it concerns advanced training, it is a grave question, whether there can be any thoroughly liberal training, which is not based on extensive special work. The very idea of liberal culture implies a power to see things in their relation to one another and to all other things. It is impossible to get a position from which this can be done, without thorough special work. Moving about on the surfaces of myriad branches of knowledge will never bring one to see their connections and understand their reasons. The idea of special culture is, therefore, an essential part of liberal culture, and there is vastly more danger that general without special training will be superficial, than that special without general will be narrow.

There is one more question which, although exceedingly interesting, I can merely touch upon. The question may be raised, Who is to pay for all this? It means a large extension of our educational system. Where are the funds to come from? Many of these institutions are supported by the fees of pupils who wish to use their advantages. Others are supported by the gifts of private individuals; still others, by the government; and others still, partly by government, partly by the fees of students, and partly by the gifts of private parties. This system must continue for a long time to come. Let such as will live and flourish by fees continue on this basis. Try by all legitimate means to encourage private individuals to contribute

to their support; but, rather than not have them, support one and all from the proceeds of public taxation. It is in the interests of the community to have them all and, in the last resort, they must be supported by the community.

In closing this long and possibly it may seem to some disconnected address, let me state again the fundamental thesis of the paper, the one thought that I am sure will grow upon you the more you reflect upon it.

The educational policy of a country should be directed toward discovering and developing the entire stock of capacities to be found in that society, just as its economic policy should aim at discovering and developing its material wealth. Indeed the latter can be done fully, only as the former is accomplished successfully. This means a steady increase in the number and variety of our educational institutions. It means a steady and persistent substitution of the systematic training in educational institutions for the hap-hazard waste of time in the shop, the office, the factory, the field, or the store. It means a steady growth in the amount of money expended in education, the increased sums to be provided, if necessary, by public taxation. It means a steadily growing appreciation of the value of education in the public mind and a consequently ever-widening sphere of dignity and power for the teacher. Let us gird up our loins for the ever-enlarging conflict, thankful to Heaven that we are permitted to share in the toil and trouble, being assured that we shall also share in the victory and the laurels.

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